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Annotated checklist of the sharks, batoids and chimaeras (Chondrichthyes: Elasmobranchii, Holocephali) from waters of Russia and adjacent areas

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Abstract This is the first comprehensive list of sharks, batoids (rays and skates) and chimaeras recorded from the waters of Russia and adjacent territories. This includes scientific names, common names (English, Russian in Latin transcription, Japanese and Czech), taxonomic comments, if necessary, distribution, synonymy and conservation status. From Russia and the border areas, 40 species of sharks, 59 species of batoids and 7 species of chimeras that belong to the two classes (Elasmobranchii and Holocephali), 11 orders, 29 families, 5 subfamilies and 54 genera have been recorded over the last hundred years.

Keywords: Checklist, Elasmobranchii, Holocephali, Russia, Northeastern Atlantic, Northwestern Pacific, Arctic

Introduction

Russia is washed by the waters of 13 seas (Black, Azov, Caspian, Baltic, Barents, White, Kara, Laptev, East Siberian, Chukchi, Bering, Okhotsk and Japan), including an open exit into two oceans the Arctic and Pacific. In the Caspian Sea, elasmobranch and holocephalan species are completely absent. In the Baltic Sea, the representatives of these classes are documented mainly in the western regions, including straits Kattegat and Skagerrak (Fricke, 2007; Zidowitz et al., 2008; Kontula and Haldin, 2012). However, they were not recorded for Russian territorial waters, with the exception of a native species *Amblyraja radiata* (Donovan, 1808) and an introduced sawfish, which is specified for the Gulf of Gdansk in a southern part of the Baltic Sea, in the borders of Russian territorial waters of the Kaliningrad Oblast (Kontula and Haldin, 2012). The absence of other species in the Russian territorial waters of the Baltic Sea are related to the low salinity in these areas, in particular for the Gdansk and Finland gulfs, where the salinity is from 3 to 9 PSU (Zidowitz et al., 2008).

However, there has been no comprehensive check list of all the known species of sharks, batoids and chimeras from Russian waters and adjacent areas. The first information concerning chondrichthyes in waters of Russia was given by the book of Pallas (1814) where he gave the first information on the ichthyofauna throughout Russia. The next data published, after Pallas (1814), was the works by Gratzianov (1907), Berg (1911), Rass (1983), Parin (2001), Gritsenko et al. (2006), Parin et al. (2014) and others. Limited information on elasmobranchs and holocephalans are found in regional ichthyofaunal studies. These include study on the Russian Far East waters by Schmidt (1904), Lindberg and Legeza (1959), Dolganov (1987), Borets (2000), Sheiko and Fedorov (2000), Sokolovsky et al. (2007, 2011). For the Arctic waters, the information was documented by Knipovich (1926), Essipov (1952), Altukhov et al. (1958), Andriashev (1954), Andriashev and Chernova (1994), Dolgov (2000, 2004, 2006, 2011, 2012, 2013), Chereshnev and Kirillov (2007), Mecklenburg et al. (2011) and etc. Finally, for the Black Sea and Azov Sea, ichthyofaunal study was

made on areas of Russia by Svetovidov (1964), Vasil'eva (2007), Diripasko et al. (2011), Boltachev and Karpova (2012).

Among the recent publications on the cartilaginous fishes, an important study was made by Grigorov and Orlov (2013) where 69 species in 20 families were listed (based on the classification by Nelson 2006) with their conservation status and distribution for Russian waters. Further, Lynghammar et al. (2013) has summarized the distribution of chondrichthyan fishes (49 species in 16 families) in Arctic Ocean and adjacent seas. However, in these works, no information is available for the taxonomic notes or status of all species recorded.

In the foreign literature on sharks, batoids and chimeras, the information about distribution of these species in waters of Russia are absent (as for the Far East region, covering the Bering Sea, Sea of Okhotsk and Sea of Japan including the Pacific waters of Kamchatka and the Kuril Islands, as well as for the Arctic waters) or represented by an extremely fragmented data, and therefore the general areas of the resulted species are limited to more southern areas.

According to Dyldin and Hanel (in press), the general list of the species in five known classes, (Myxini (1 species); Cephalaspidomorphi (11 species); Elasmobranchii (98 species); Holocephali (7 species); Actinopterygii (about 1780 species) in waters of Russia, and adjacent territories, includes a total of about 1900 fish species. It has been revealed since Pallas (1814) to present day that 22 or 23 sharks, 44 batoids and 2 chimeras (including one species defined as *Hydrolagus* cf. *purpurescens*) have been noted within the 200-mile exclusive economic zone of the Russian Federation. In the beginning of the last century, according to Gratzianov (1907), for waters of Russia and adjoining territories 14 sharks, 16 batoids and one chimera were documented.

However, based on a number of foreign works, primarily Japanese researchers (see those in the text below), a number of species of sharks, batoids and chimeras are repeatedly noticed in the border waters between Russia and northern Norway in Barents Sea, and the North American coast of Alaska, including the Aleutian Islands (U.S.A.), Hokkaido Island (Japan), and Sea of Japan. These data do not exclude a finding of these species and in adjacent waters of Russia, which includes about 16 sharks, 15 batoids and 4 chimeras.

In this regard, the study area is actually the followings: the Azov Sea and Black Sea, the western and southern parts of Baltic Sea and from northern Norway in the southwestern Barents Sea, including all the Russian Arctic seas eastward to the Chukchi Sea and Beaufort Sea, to the south through Bering Strait on the North American coast to the Gulf of Alaska and along the Asian coast to the Korean Peninsula in the Sea of Japan and the Pacific side of Hokkaido Island and northern Honshu Island in Japan including the Pacific side of the Kuril Island and Aleutian Islands, U.S.A.

This paper will provide basic knowledge to taxonomy and distribution records of sharks, batoids and chimeras of Russia as well as conservation and protection status of those species in these areas.

Methods

For the general classification of higher taxonomic level from class to a subfamily, we follow Eschmeyer and Fong (2014) and van der Laan et al. (2014). For the classification of genera we follow Stevenson et al. (2007) and also we refer Ishihara et al. (2012) and others. For the type locality and synonymy, we generally follow Eschmeyer (2014), and also Compago (1984, 2001), Compango et al. (2005), Ebert and Stehmann (2013), Ebert et al. (2013).

Global distributions of the species are shown in accordance with the FAO Major Fishing Areas. (http://www.fao.org/fishery/area/search/en) and Eschmeyer (2014), on the text as «Distribution». For all species with some exceptions, common names are given in English (En), Russian (Ru), Japanese (Jp) and Czech (Cz), on the text as «Common names». Common name in Japanese is given by H. Ishihara, and names in Russian, Czech and English are given by Dyldin and Hanel (in press).

The habitat of each species is classified as “marine species” (only in sea water) or “marine and brackish species” (referring to sea water and brackish marine water). Synonymy (as «Synonyms») and taxonomy notes (as «Remarks») are also given. A sign «?» means that there is confusion and requires clarification.

The conservation status for each species is according to the IUCN Red List of Threatened Species as of 2014 (on the text as «Conservation status»), see online http://www.iucnredlist.org

A Taxonomic List

Class: **Elasmobranchii** Müller, 1845
(En - Sharks and batoids; Ru - Plastinozhabernye ryby; Cz - Příčnoústí)

Order: **Hexanchiformes** Garman, 1913
(En - Cow sharks; Ru - Mnogozhabernikovye; Jp - Kagura zamé-moku; Cz - Šedouni)

Family: **Hexanchidae** Gray, 1851
(En - Cow sharks; Ru - Grebnezubye akuly; Jp - Kagurazamé-ka; Cz - Šedounovití)

Genus: ***Heptranchias*** Rafinesque, 1810

1. ***Heptranchias perlo*** (Bonnaterre, 1788)

Squalus perlo Bonnaterre, 1788: 10 (type locality: Mediterranean Sea [«La Méditerranée»], France)

Common names: En - Sharpnose sevengill shark; Ru - Uzkogolovaya semizhabernaya akula; Jp - Edo-abura-zamé; Cz - Žralok sedmižábrý

Distribution: Circumglobal in tropical and temperate seas, including Mediterranean Sea, northern Adriatic Sea and Black Sea (Compagno, 1984; Serena, 2005; Fricke et al., 2007; Ebert and Stehmann, 2013). In the western Pacific, Hokkaido Island and Sea of Japan near Sado Island to Taiwan, Philippines, Indonesia, including South China Sea and Yellow Sea, as well as Australia and New Zealand (Lindberg and Legeza, 1959; Compagno, 1984; Randall and Lim, 2000; Compagno et al., 2005; Liu and Ning, 2011; Ebert et al., 2013; Shinohara et al., 2014). The closest occurrence from Russian waters is Pacific Ocean in the northern Japan (southern Hokkaido and northern Honshu islands) and Sado Island, the Sea of Japan (Lindberg and Legeza, 1959; Amaoka et al., 1989; Shinohara et al., 2009, 2011). Marine species.

Remarks: No information is available on type specimens (see Eschmeyer, 2014).

Synonyms: *Notidanus (Heptanchus) cinereus* var. *aetatis* Bellotti, 1878; *Heptrancus angio* Costa, 1857; *Squalus cinereus* Gmelin, 1789; *Heptranchias dakini* Whitley, 1931; *Heptranchias deani* Jordan & Starks, 1901; *Notidanus (Heptanchus) cinereus* var. *pristiurus* Bellotti, 1878

Conservation status: Near Threatened

Genus: ***Hexanchus*** Rafinesque, 1810

2. ***Hexanchus griseus*** (Bonnaterre, 1788)

Squalus griseus Bonnaterre, 1788: 9 (type locality: Mediterranean Sea [«La Méditerranée»], France)

Common names: En - Bluntnose sixgill shark; Ru - Seraya shestizhabernaya akula; Jp - Kagura-zamé; Cz - Žralok šedý

Distribution: Circumglobal in tropical and temperate seas, including Mediterranean Sea, Marmara Sea and Black Sea (Compagno, 1984; Serena, 2005; Fricke et al., 2007). Western Pacific: Pacific coast of northern Honshu Island (Tohoku region, Japan), Taiwan and Philippines to Australia and New Zealand (Compagno, 1984; Compagno et al., 2005; Shinohara et al., 2009; Ebert et al., 2013). Eastern Pacific: Aleutian Islands,

U.S.A. to Baja California, Mexico and Chile (Compagno, 1984; Love et al., 2005). The closest occurrence from Russian waters is Pacific Ocean in the northern Honshu Island (Japan), as is also Sea of Japan and in the southern part of the Aleutian Islands, U.S.A. (Love et al., 2005; Stevenson et al., 2007; Shinohara et al., 2009, 2014). Marine species.

Remarks: No information is available on type specimens (see Eschmeyer, 2014). Some authors recognized a separate subspecies *Hexanchus griseus nakamurai* Teng, 1962 – bigeye sixgill shark, which was originally described from Taiwan. However this subspecies is generaly treated as a separate species *Hexanchus nakamurai* Teng, 1962 (see Taniuchi and Tachikawa, 1991; Ho and Shao, 2011; Ebertand Stehmann, 2013; also see note by Ebert et al., 2013). A record of the finding of this species in waters of western part of the Baltic Sea (Fricke, 2007) is not confirmed (see Kontula and Haldin, 2012: 18).

Synonyms: *Hexanchus griseus australis* de Buen, 1960; *Hexanchus corinus* Jordan & Gilbert, 1880; *Notidanus monge* Risso, 1827; *Squalus vacca* Bloch & Schneider, 1801; *Notidanus vulgaris* Pérez Canto, 1886

Conservation status: Near Threatened

Genus: ***Notorynchus*** Ayres, 1855

3. ***Notorynchus cepedianus*** (Péron, 1807)

Squalus cepedianus Péron, 1807: 337 (type locality: Adventure Bay, Tasmania, Australia)

Common names: En - Broadnose sevengill shark; Ru - Ploskogolovaya semizhabernaya akula; Jp - Ebisu-zamé; Cz - Žralok širokonosý

Distribution: Widespread in temperate seas (Compagno, 1984; Williams et al., 2011). Western Pacific: southern Japan, along the Korean Peninsula, Yellow Sea and South China Sea, as well as Australia and New Zealand (Compagno, 1984; Randall and Lim, 2000; Liu and Ning, 2011; Ebert et al., 2013). Eastern Pacific: southeastern Alaska, U.S.A. and northern part of British Columbia, Canada to Baja California, Mexico and Chile (Compagno, 1984, 2005; Love et al., 2005; Williams et al., 2011). Despite the wide distribution of this species, it is known the closest occurrence from Russian waters is southern Japan, including southern Sea of Japan, along the Korean Peninsula and northern part of British Columbia, Canada (Compagno, 1984, 2005; Imai et al., 2005; Love et al., 2005; Williams et al., 2011; Ebert et al., 2013). However, it should be noted that, in Russian waters, the record from the Sea of Okhotsk is specifically given by Grigorov and Orlov (2013). Record from Hokkaido Island (Japan), but is not confirmed (see Imai et al., 2005). Marine species.

Remarks: The location of the holotype is unknown, see Eschmeyer (2014).

Synonyms: *Notorhynchus borealis* Gill, 1864; *Notidanus ferox* Pérez Canto, 1886; *Heptranchias haswelli* Ogilby, 1897; *Notidanus indicus* Agassiz, 1838; *Notorynchus macdonaldi* Whitley, 1931; *Notorynchus maculatus* Ayres, 1855; *Notidanus medinae* Philippi, 1902; *Notorhynchus ocellatus* Devincenzi, 1920; *Heptranchias pectorosus* Garman, 1884; *Squalus platycephalus* Tenore, 1809; *Heptranchias spilotus* Lahille, 1913; *Notidanus wolniczkyi* Philippi, 1902

Conservation status: Data Deficient

Family: **Chlamydoselachidae** Garman, 1884

(En - Frill sharks; Ru - Plashchenosnye akuly; Jp - Rabuka-ka; Cz - Štíhlounovití)

Genus: ***Chlamydoselachus*** Garman, 1884

4. ***Chlamydoselachus anguineus*** Garman, 1884

Chlamydoselachus anguineus Garman, 1884: 47 (type locality: "Japanese seas", probably southeastern Honshu Island), see Ebert and Compagno (2009), Ebert at al. (2013)

Common names: En - Frilled shark; Ru - Plashchenosnaya akula; Jp - Rabuka; Cz - Žralok límcový.

Distribution: Atlantic, Pacific and western part of Indian Ocean. Eastern Atlantic: northern Norway (southwestern Barents Sea to south of Bear Island, pers. comm. by A.V. Dolgov) and Scotland, western Ireland, France, Spain, Portugal, Morocco, Madeira, Angola, northern Namibia and likely to the Cape of Good Hope (Compagno, 1984). Southwestern part of the Indian Ocean in the region of Mozambique Seamount (Timokhin, 1980; Kukuev and Pavlov, 2008; Parin et al., 2008). Western Pacific: Japan (from northern part of Honshu Island in the Tohoku region and to south), Taiwan, Australia (New South Wales) and New Zealand (Compagno, 1984; Tanaka et al., 1990; Shinohara et al., 2009; Ebert and Compagno, 2009; Ebert et al., 2013). Eastern Pacific: from central part of California (U.S.A.) to Chile (Love et al., 2005). From the Russian coast, it is not recorded, and the closest occurrence from Russian waters is the Barents Sea (Gratzianov, 1907; Berg, 1911; Andriashev, 1954; Dolgov, 2004, 2011) and Pacific coast of northern part of Honshu Island, including Kuroshio Current, Japan (Gratzianov, 1907; Shinohara et al., 2009). Marine species.

Remarks: In light of new data by Ebert and Compagno (2009) for the previously monotypic genus *Chlamydoselachus*, a new species *Chlamydoselachus africana* Ebert & Compagno, 2009 – southern frilled shark is described. This new species is distributed from southern Angola to southern Namibia (the Atlantic coast of central and southwestern Africa), and probably a range of the new species is wider than that of *Chlamydoselachus anguineus*. The spelling the specific name as «*anguinus*» is misspelling.

Conservation status: Near Threatened

Order: **Heterodontiformes** Garman, 1885
(En - Bullhead sharks; Ru - Raznozuboobraznye; Jp - Nekozamé-moku; Cz - Různozubci)

Family: **Heterodontidae** Gray, 1851
(En - Bullhead sharks; Ru - Raznozubye; Jp - Nekozamé-ka; Cz - Různozubcovití)

Genus: ***Heterodontus*** Blainville, 1816

5. ***Heterodontus japonicus*** Miklouho-Maclay & Macleay, 1884

Heterodontus japonicus Miklouho-Maclay & Macleay, 1884: 428, pl. 20 (type locality: Tokyo, Japan)

Common names: En - Japanese bullhead shark; Ru - Yaponskaja bych'ya akula; Jp - Neko-zamé; Cz - Různozubec japonský

Distribution: Northwestern Pacific. Sea of Japan, Yellow Sea and East China Sea, also Japan (from northern Hokkaido Island), Korean Peninsula, northern China and Taiwan (Lindberg and Legeza, 1959; Compagno, 1984, 2001; Randall and Lim, 2000; Liu and Ning, 2011; Ebert et al., 2013). Russian area: it is known only from the single specimen from Peter the Great Bay, Sea of Japan (Ivankov and Ivankova, 1998; Sokolovsky et al., 2007, 2011). Marine species.

Conservation status: Least Concern

Order: **Orectolobiformes** Compagno, 1973
(En - Carpet sharks; Ru - Vobbegongoobraznye; Jp - Tenjiku-zamé-moku; Cz - Malotlamci)

Family: **Rhincodontidae** Müller & Henle, 1839
(En - Whale sharks; Ru - Kitovye akuly; Jp - Jimbeizame-ka; Cz - Veležralokovití)

Genus: ***Rhincodon*** Smith, 1829

6. ***Rhincodon typus*** Smith, 1828

Rhincodon typus Smith, 1828: 2 (type locality: Table Bay, South Africa, southeastern Atlantic)

Common names: En - Whale shark; Ru - Kitovaya akula; Jp - Jimbeizame; Cz - Žralok obrovský

Distribution: Cosmopolitan to cold temperate water, but mainly in warm water. The closest occurrence from Russian waters is the Okhotsk coast of Hokkaido Island, Japan (Tomita et al., 2014). Marine species.

Synonyms: *Rhinodon pentalineatus* Kishinouye, 1901; *Micristodus punctatus* Gill, 1865; *Rhinodon typicus* Müller & Henle, 1839; *Rhinodon typicus* Smith, 1845

Conservation status: Vulnerable A2bd+3d

Family: **Orectolobidae** Gill, 1896

(En - Carpet sharks or wobbegongs; Ru - Kovrovye akuly; Jp - Tenjikuzamé-ka; Cz - Wobegongovití)

Genus: ***Orectolobus*** Bonaparte, 1834

7. ***Orectolobus japonicus*** Regan, 1906

Orectolobus japonicus Regan, 1906: 435 (type locality: Japan)

Common names: En - Japanese wobbegong; Ru - Yaponskaya kovrovaya akula; Jp - Oosé; Cz - Wobegong japonský

Distribution: Northwestern Pacific. Sea of Japan, Yellow Sea, East China Sea and South China Sea, including Pacific coast of southern Japan, Korean Peninsula, China, Taiwan and Vietnam (Lindberg and Legeza, 1959; Compagno, 1984, 2001; Randall and Lim, 2000; Compagno et al., 2005; Goto, 2008; Ebert et al., 2013). Russian area: it is known based on the single specimen (it was caught in 1963) from Peter the Great Bay, Sea of Japan (Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011). Marine species.

Conservation status: Data Deficient

Order: **Lamniformes** Garman, 1885

(En - Mackerel sharks; Ru -Lamnoobraznye; Jp - Nezumi-zamé-moku; Cz - Obrouni)

Family: **Lamnidae** Müller & Henle, 1838

(En - Mackerel sharks; Ru - Lamnovye; Jp - Nezumizamé-ka; Cz - Lamnovití)

Genus: ***Carcharodon*** Smith, 1838

8. ***Carcharodon carcharias*** (Linnaeus, 1758)

Squalus carcharias Linnaeus, 1758: 235 (type locality: «in Europa»)

Common names: En - Great white shark; Ru - Bol'shaya belaya akula; Jp - Hohojiro-zamé; Cz - Žralok lidožravý

Distribution: Nearly cosmopolitan, but mostly in temperate seas. Russian area: sporadically found from Peter the Great Bay, Sea of Japan and Aniva Bay, Sakhalin Island in the southern part of Sea of Okhotsk, also Pacific coast of Kuril Islands (Fedorov and Parin, 1998; Parin, 2001; Compagno, 2001; Ivanov and Sukhanov, 2002; Sokolovsky et al., 2007, 2011; Velikanov, 2010; Dolganov, 2012); probably Pacific and Bering sides of the Kamchatka (Berg, 1911; Nakano and Nakaya, 1987; Myagkov, 1988; Sheiko and Fedorov, 2000). Marine and brackish species.

Remarks: No information is available on type specimens (see Eschmeyer, 2014). It is necessary to select the lectotype or neotype from the Mediterranean Sea or Northeastern Atlantic. The previously selected neotype by Fricke (1999) is invalid (see Eschmeyer, 2014).

Synonyms: *Carcharodon albimors* Whitley, 1939; *Carcharias atwoodi* Storer, 1848; *Carcharodon capensis* Smith, 1839; *Carcharias lamia* Rafinesque, 1810; *Carcharias maso* Morris, 1898; *Carcharodon rondeletii* Müller & Henle, 1839; *Carcharodon smithi* Bonaparte, 1838; *Carcharodon smithii* Agassiz, 1838; *Carcharias verus* Cloquet, 1817; *Carcharias vorax* Owen, 1853; *Squalus (Carcharias) vulgaris* Richardson, 1836

Conservation status: Vulnerable A2cd+3cd

Genus: ***Isurus*** Rafinesque, 1810

9. ***Isurus oxyrinchus*** Rafinesque, 1810

Isurus oxyrinchus Rafinesque, 1810: 12, pl. 13, fig. 1 (type locality: Sicily, Italy, Mediterranean Sea)

Common names: En - Shortfin mako; Ru - Korotkoperyj mako; Jp - Ao-zamé; Cz - Žralok mako

Distribution: Everywhere in tropical and temperate seas. Russian area: it is known based on separate specimens from Sea of Japan and Okhotsk Sea, including southern Sakhalin Island, southern Kamchatka and Pacific coast of Kuril Islands (Lindberg and Legeza, 1959, as *Isurus glaucus*; Fedorov and Parin, 1998; Sheiko and Fedorov, 2000; Compagno, 2001; Ivanov and Sukhanov, 2002; Sokolovsky et al., 2007, 2011; Dolganov, 2009). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). The spelling the specific name «*oxyrhinchus*» and «*oxyrhynchus*» are misspelling (Eschmeyer, 2014).

Synonyms: *Isurus tigris africanus* Smith, 1957; *Isurus bideni* Phillipps, 1932; *Squalus (Lamna) cepedii* Lesson, 1831; *Isuropsis dekayi* Gill, 1862; *Oxyrhina glauca* Müller & Henle, 1839; *Oxyrhina gomphodon* Müller & Henle, 1839; *Lamna guentheri* Murray, 1884; *Lamna huidobrii* Philippi, 1887; *Lamna latro* Owen, 1853; *Isurus mako* Whitley, 1929; *Lamna oxyrhina* Cuvier & Valenciennes in Agassiz, 1835; *Isurus spallanzani* Rafinesque, 1810; *Carcharias tigris* Atwood, 1869

Conservation status: Vulnerable A2abd+3bd+4abd

Genus: ***Lamna*** Cuvier, 1816

10. ***Lamna ditropis*** Hubbs & Follett, 1947

Lamna ditropis Hubbs & Follett, 1947: 194 (type locality: La Jolla, California, U.S.A.)

Common names: En -Salmon shark; Ru - Lososevaya akula; Jp - Nezumi-zamé; Cz - Žralok tichooceánský

Distribution: North Pacific. Pacific coast of Hokkaido Island (Japan), also Sea of Japan, Okhotsk Sea and Bering Sea southward to Taiwan, including Kamchatka, Taui Bay (the coast of Magadan Oblast, Russia), Tatar Strait, Peter the Great Bay, Sakhalin Island and Pacific waters of Kuril Islands, on the North America coast it is known from Gulf of Alaska (U.S.A.) and British Columbia (Canada) to California and into Mexico along the Baja Peninsula (Lindberg and Legeza, 1959; Eschmeyer and Herald, 1983; Amaoka et al., 1989; Savinykh, 1998; Sheiko and Fedorov, 2000; Compagno, 2001; Mecklenburg et al., 2002; Love et al., 2005; Chereshnev et al., 2005; Velikanov, 2006; Sokolovsky et al., 2007, 2011); one specimen recorded near the Arctic waters in the northern part of Bering Strait, 66°06'N, 168°28'W (Mecklenburg et al., 2006, 2011). Marine and brackish species (Myagkov, 1992).

Conservation status: Least Concern

11. ***Lamna nasus*** (Bonnaterre, 1788)

Squalus nasus Bonnaterre, 1788: 10, pl. 85, fig. 350 (type locality: Cornwall, England)

Common names: En - Porbeagle; Ru - Sel'devaya akula; Jp - Nishi-nezumi-zamé; Cz - Žralok nosatý

Distribution: Nearly everywhere in temperate seas, including Norwegian Sea, North Sea, western Baltic Sea and Mediterranean Sea (Berg, 1911; Compagno, 2001; Fricke, 2007; Fricke et al., 2007; Williams et al., 2008; Dolgov, 2011; Eschmeyer, 2014). Russian area: Barents Sea including the Murman coast (Ehrenbaum, 1901, as *Isurus cornubicus*; Gratzianov, 1907, as *Lamna cornubica*; Berg, 1911, as *Lamna cornubica*; Andriashev, 1954; Parin, 2001; Dolgov, 2011; Mecklenburg et al., 2011). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Squalus cambricus* Turton, 1800; *Squalus cornubicus* Gmelin, 1789; *Oxyrhina daekayi* Gill, 1861; *Squalus monensis* Shaw, 1804; *Squalus pennanti* Walbaum, 1792; *Lamna philippii* Pérez Canto, 1886; *Squalus selanonus* Leach, 1818; *Selanonius walkeri* Fleming, 1828; *Lamna whitleyi* Phillipps, 1935

Conservation status: Vulnerable A2bd+3d+4bd

Family: **Cetorhinidae** Gill, 1862
(En - Basking sharks; Ru - Giganskie akuly; Jp - Uba-zamé-ka; Cz - Obrounovití)

Genus: ***Cetorhinus*** Blainville, 1816

12. ***Cetorhinus maximus*** (Gunnerus, 1765)

Squalus maximus Gunnerus, 1765: 33, pl. 2 (type locality: Trondhjem, Norway)

Common names: En - Basking shark; Ru - Gigantskaya akula; Jp - Uba-zamé; Cz -Žralok veliký

Distribution: Nearly cosmopolitan, preferring Arctic and temperate waters. North Pacific: Pacific coast of Japan (Hokkaido and Honshu Island), also Sea of Japan, Okhotsk Sea and Bering Sea, including Gulf of Alaska and on Pacific coast of North America to Gulf of California (Lindberg and Legeza, 1959; Amaoka et al., 1989; Izawa and Shibata, 1993; Mecklenburg et al., 2002; Love et al., 2005; Sokolovsky et al., 2007, 2011; Stevenson et al., 2007). Russian area: the Barents Sea and White Sea in the Arctic region, and Sea of Japan, Okhotsk Sea and Bering Sea including Pacific coast of Kurils and southern Sakhalin Island in the northwestern part of Pacific Ocean (Gratzianov, 1907; Andriashev, 1954; Myagkov, 1992; Fedorov and Parin, 1998; Parin, 2001; Compagno, 2001; Ivanov and Sukhanov, 2002; Sokolovsky et al., 2007, 2011; Mecklenburg et al., 2011; Ebert and Stehmann, 2013). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). The lectotype selected by Fricke (1999) is based on the illustration (Eschmeyer, 2014).

Synonyms: ?*Tetroras angiova* Rafinesque, 1810; *Cetorhinus blainvillei* de Brito Capello, 1869; S*qualus cetaceus* Gronow in Gray, 1854; *Squalus elephas* Lesueur, 1822; *Squalis (Cetorhinus) gunneri* Blainville, 1816; *Squalus gunnerianus* Blainville, 1810; *Squalus homianus* Blainville, 1810; *Cetorhinus maximus* forma *infanuncula* Deinse & Adriani, 1953; *Squalus isodus* Macri, 1819; *Tetroras maccoyi* Barrett, 1933; *Polyprosopus macer* Couch, 1862; *Cetorhinus normani* Siccardi, 1961; *Squalus pelegrinus* Blainville, 1810; *Selachus pennantii* Cornish, 1885; *Halsydrus pontoppidiani* Fleming, 1817; *Squalus rashleighanus* Couch, 1838; *Squalus rostratus* Macri, 1819; *Squalis (Cetorhinus) shavianus* Blainville, 1816

Conservation status: Vulnerable A2ad+3d

Family: **Alopiidae** Bonaparte, 1838
(En - Thresher sharks; Ru - Lis'i akuly, ili morskie lisitsy; Jp - Onaga-zamé-ka; Cz - Liškounovití)

Genus: ***Alopias*** Rafinesque, 1810

13. ***Alopias vulpinus*** (Bonnaterre, 1788)

Squalus vulpinus Bonnaterre, 1788: 9 (type locality: Mediterranean Sea)

Common names: En - Thintail thresher; Ru - Morskaya lisitsa; Jp - Ma-onaga; Cz -Liškoun obecný

Distribution: Circumglobal in tropical, temperate and colder waters. The closest occurrence from Russian waters is the Baltic Sea and Black Sea (the Turkish coast), and in the North Pacific it known near northern Japan (from northern Hokkaido Island), Sea of Japan and Korean Peninsula and one specimen was caught near southeastern Alaska, U.S.A. (Compagno, 1984, 2001; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007; Fricke et al., 2007; Fishes the Shiretoko coast, 2010; Kontula and Haldin, 2012; Shinohara et al., 2014). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Squalus alopecias* Gronow in Gray, 1854; *Alopecias barrae* Pérez Canto, 1886; *Alopias caudatus* Phillipps, 1932; *Alopecias chilensis* Philippi, 1902; *Alopias greyi* Whitley, 1937; *Alopecias longimana* Philippi, 1902; *Alopias macrourus* Rafinesque, 1810; *Vulpecula marina* Garman, 1913; *Galeus vulpecula* Rafinesque, 1810; *Squalus vulpes* Gmelin, 1789; *Squalus vulpes* Berkenhout, 1789

Conservation status: Vulnerable A2bd+3bd+4bd

Order: **Carcharhiniformes** Garman, 1913
(En - Ground sharks; Ru - Karkharinoobraznye; Jp - Mejiro-zamé-moku; Cz - Žralouni)

Family: **Pentanchidae** Smith, 1912
(En - Pentanchids; Ru - Pentakhovye)

Remarks: This family was considered to synonymy with Scyliorhinidae, but, based on data by Iglésias et al. (2005), it is now assigned to the separate family.

Genus: ***Apristurus*** Garman, 1913

14. ***Apristurus fedorovi*** Dolganov, 1983

Apristurus fedorovi Dolganov, 1983: 74 (in key), fig. 101 (type locality: Japan, 39°50'N, 142°48'E)

Common names: En - Federov's catshark; Ru - Severnaya koshach'ya akula; Jp - Arame-hera-zamé; Cz – Máčka Fedorovova

Distribution: Northwestern Pacific. Pacific coast of northern Japan, Hokkaido Island and northern Honshu Island in the Tohoku region (Nakaya and Shirai, 1992; Ando et al., 2002; Shinohara et al., 2009); it is extremely rare in Pacific side of southern Kuril Islands (Fedorov and Parin, 1998; Parin, 2001) and probably northern Kuril Islands (Sheiko and Fedorov, 2000). Marine species.

Remarks: According to Nakaya and Sato (1999), the genus *Apristurus* is composed of about 32 species, and probably still a large number remains undescribed. This is due to the difficulty to collect the material (because members of the genus *Apristurus* occupy deep-waters) and due to a conservative methods to identify species (the special structure of the surface of the body, does not allow to give accurate morphometric characters (Nakaya, 1975)), which often results in the incorrect determination of not only the particular species, but also a genus within this family. Nakaya and Sato (1999) recognized three groups in the genus *Apristurus*: «*longicephalus*» (2 species), «*brunneus*» (20 species) and «*spongiceps*» (10 species). This latter group includes *A. fedorovi* Dolganov, 1983.

It should be noted that some sources indicate date of the original description as Dolganov (1985), which is incorrectly referred to the later work by this author, "Dolganov V. N. 1985. A new species of shark from the north-west Pacific Ocean. Biologiya Morya v. 1985 (no. 3): 64–65.", (see [ref. 8093] by Eschmeyer, 2014).

Conservation status: Data Deficient

15. ***Apristurus japonicus*** Nakaya, 1975

Apristurus japonicus Nakaya, 1975: 24, figs. 10, 11 (type locality: off Cape Daito, Chiba Prefecture, Japan)

Common names: En - Japanese catshark; Ru - Yaponskaya chernaya koshach'ya akula; Jp - Nihon-hera-zamé; Cz -Máčka japonská

Distribution: Northwestern Pacific. This species was described from Pacific waters of the central Honshu Island, Japan (Nakaya, 1975). According Ando et al. (2002) the closest occurrence from Russian waters is Pacific coasts of Hokkaido and northern Honshu islands, Japan. Marine species.

Conservation status: Data Deficient

Genus: ***Galeus*** Rafinesque, 1810

16. ***Galeus melastomus*** Rafinesque, 1810

Galeus melastomus Rafinesque, 1810: 13 (type locality: Sicily, Italy)

Common names: En - Blackmouth catshark; Ru - Chernorotaya akula; Jp - Kuro-guchi-yamori-zamé; Cz - Máčka černoústá

Distribution: Eastern Atlantic and adjacent Arctic. From northern Norwegian coast and Faeroes (Denmark) southward along the eastern Atlantic Ocean coast to Senegal, including western Baltic Sea, Mediterranean Sea and Black Sea (Andriashev, 1954; Compagno, 1984; Serena, 2005; Fricke, 2007; Fricke et al., 2007; Williams et al., 2008; Kontula and Haldin, 2012; Ebert and Stehmann, 2013; Eschmeyer, 2014). Russian area: it is known based on only one specimen from the coast of Murman, Barents Sea (Berg, 1911; Andriashev, 1954; Rass, 1983; Parin, 2001). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). In the past, this species was belonged to the genus *Pristiurus*, e.g., Berg (1911), Andriashev (1954).

Synonyms: *Squalus annulatus* Nilsson, 1832; *Scyllium artedi* Risso, 1820; *Scyllium melanostomum* Bonaparte, 1834; *Pristiurus melanostomus* Lowe, 1843; *Squalus prionurus* Otto, 1821; *Pristiurus souverbiei* Lafont, 1869

Conservation status: Least Concern

Genus: ***Halaelurus*** Gill, 1862

17. ***Halaelurus buergeri*** (Müller & Henle, 1838)

Scyllium buergeri Müller & Henle, 1838: 8, pl. 2 (type locality: Japan)

Common names: En - Blackspotted catshark; Ru - Koshach'ya akula Byurgera; Jp - Nagasaki-tora-zamé; Cz - Máčka Bürgerova

Distribution: Northwestern Pacific. Japan (from Hokkaido Island), Sea of Japan, Korean Peninsula, China, Taiwan and ?Philippines (Lindberg and Legeza, 1959; Springer and D'Aubrey, 1972; Nakaya, 1975; Compagno, 1984; Compagno et al., 2005; Valenti, 2009; Ebert et al., 2013; Shinihara et al., 2014). For the water of Russia is not noted. Marine species.

Remarks: The lectotype was designated by Boeseman (1947) (see Eschmeyer, 2014). Compagno et al. (2005) listed *Halaelurus* cf. *buergeri* in the list of species from the waters of Philippines, and it is most probably a new undescribed species. In the past, there was a record from the coast of India (Lindberg and Legeza, 1959; Nakaya, 1975).

Conservation status: Data Deficient

Family: **Scyliorhinidae** Gill, 1862

(En - Catsharks; Ru - Koshach'i akuly; Jp - Tora-zamé-ka; Cz - Máčkovití)

Genus: ***Cephaloscyllium*** Gill, 1862

18. ***Cephaloscyllium umbratile*** Jordan & Fowler, 1903

Cephaloscyllium umbratile Jordan & Fowler, 1903: 602, 603, fig. 1 (type locality: Nagasaki, Japan, 32°43'N, 129°50'E)

Common names: En - Japanese swellshark; Ru - Koshach'egolovaya akula; Jp - Nanuka-zamé; Cz - Máčka velkoskrvnná

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island), also Sea of Japan, Yellow Sea, East China Sea and South China Sea, including the coasts of Korean Peninsula, China and Taiwan (Lindberg and Legeza, 1959; Nakaya, 1975; Amaoka et al., 1989; Nakaya and Shirai, 1992; Inoue and Nakaya, 2006; Shinohara et al., 2011; Nakaya et al., 2013; Ebert et al., 2013; Shinohara et al., 2014). The closest occurrence from Russian waters is Pacific side of the northern Japan (from Hokkaido Island) and Sea of Japan (Lindberg and Legeza, 1959; Nakaya, 1975; Amaoka et al., 1989; Shinohara et al., 2011, 2014). Marine species.

Remarks: In the past, some authors (e.g., Springer, 1979; Compagno, 1984; Gubanov et al., 1986) believed that this species and *Cephaloscyllium formosanum* Teng, 1962 were synonyms of *Cephaloscyllium isabellum*

(Bonnaterre, 1788). However, according to recent revision of the genus *Cephaloscyllium* by Schaaf-Da Silva and Ebert (2008), Inoue and Nakaya (2006), Nakaya et al. (2013), it has been shown that *C. umbratile* and *C. formosanum* are separate species. A so-called smaller (dwarf) form (with maximum known length is 44.1 cm, see Nakaya et al. (2013)) previously identified as *C. umbratile* was described as *Cephaloscyllium sarawakensis* Yano, Ahmed & Gambang, 2005 (see Schaaf-Da Silva and Ebert, 2008; Nakaya et al., 2013). At the same time *Cephaloscyllium circulopullum* Yano, Ahmad & Gambang, 2005 is a junior synonym of *C. sarawakensis*, «because distinguishing characters used in the original descriptions are invalid» (quoted by Nakaya et al. (2013)). Further, these dwarf forms were described as *Cephaloscyllium parvum* Inoue & Nakaya, 2006, but according to a priority rule, it is synonymized with *Cephaloscyllium sarawakensis* Yano, Ahmed & Gambang, 2005 (Schaaf-Da Silva and Ebert, 2008; Nakaya et al., 2013).

Conservation status: Data Deficient

Genus: ***Scyliorhinus*** Blainville, 1816

19. ***Scyliorhinus canicula*** (Linnaeus, 1758)

Squalus canicula Linnaeus, 1758: 234 (type locality: Mediterranean Sea and northeastern Atlantic [«Habitat in Oceano Europe»])

Common names: En - Small-spotted catshark; Ru - Koshach'ya akula; Jp - Hana-kake-tora-zamé; Cz - Máčka skvrnitá

Distribution: Northeastern Atlantic and probably adjacent Arctic. From Norway (Norwegian Sea) and British Islands to the coast of Senegal (western Africa), including Baltic Sea (western part), Mediterranean Sea, Aegean Sea, Marmara Sea and Black Sea (on the one specimen in 1837 off the coast of Crimea Peninsula) (Gratzianov, 1907; Berg, 1911; Svetovidov, 1964; Compagno, 1984; Parin, 2001; Serena, 2005; Fricke, 2007; Fricke et al., 2007; Vasil'eva, 2007; Movchan, 2009; Kontula and Haldin, 2012; Ebert and Stehmann, 2013; Lynghammar et al., 2013). In the Russian part of Barents Sea, this species is not catched (pers. comm. by A.V. Dolgov), except for an old recorded from the Murman coast by Gratzianov (1907: 25, as *Pristiurus catulus*).

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: ?*Scyllium acutidens* Vaillant, 1888; *Scyliorhinus canicula* var. *albomaculata* Pietschmann, 1906; *Squalus catulus* Linnaeus, 1758; *Catulus duhamelii* Garman, 1913; *Squalus elegans* Blainville, 1825

Conservation status: Least Concern

20. ***Scyliorhinus torazame*** (Tanaka, 1908)

Catulus torazame Tanaka, 1908: 6, pl. 2 (type locality: Misaki, Japan)

Common names: En - Cloudy catshark; Ru - Yaponskaya koshach'ya akula; Jp - Tora-zamé; Cz - Máčka torazame

Distribution: Northwestern Pacific. Japan (from Hokkaido Island) and southern Korean Peninsula (from Sea of Japan) to the China, Taiwan and probably Philippines (Lindberg and Legeza, 1959; Nakaya, 1975; Compagno, 1984; Amaoka et al., 1989; Nakaya and Shirai, 1992; Carpenter and Niem, 1998; Compagno et al., 2005; Shihohara et al., 2011, 2014). It has not been recorded from the water of Russia. Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Scyliorhinus rudis* Pietschmann, 1908

Conservation status: Least Concern

Family: **Triakidae** Gray, 1851

(En - Hound sharks; Ru - Kun'i akuly; Jp - Dochi-zamé-ka; Cz - Hladkounovití)

Subfamily: **Galeorhininae** Gill, 1862
(En - Tope sharks; Ru - Supovye akuly; Jp - Ikoku-eirakubuka-aka)

Genus: ***Galeorhinus*** Blainville, 1816

21. ***Galeorhinus galeus*** (Linnaeus, 1758)

Squalus galeus Linnaeus, 1758: 234 (type locality: «Habitat in Oceano Europae»)

Common names: En - Tope shark; Ru - Supovaya akula; Jp - Ikoku-eirakubuka; Cz - Psohlav obecný

Distribution: Mainly in temperate seas, except for the Northwestern Atlantic and Northwestern Pacific (Ebert and Stehmann, 2013).The closest occurrence to Russian waters is a report from the Norwegian part of the Barents Sea including near Varanger Fjord, Norway (Berg, 1911, as *Galeus galeus*; Dolgov, 2000; Stiansen and Filin, 2008; Karamushko, 2008; Lynghammar et al., 2013). From the Russian part of Barents Sea, this species has not been recorded (pers. comm. by A.V. Dolgov). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Galeus australis* Macleay, 1881; *Galeus canis* Bonaparte, 1834; *Galeus chilensis* Pérez Canto, 1886; *Galeus communis* Owen, 1853; *Carcharhinus cyrano* Whitley, 1930; *Galeus linnei* Malm, 1877; *Galeus molinae* Philippi, 1887; *Galeus nilssoni* Bonaparte, 1846; *Squalus rhinophanes* Péron, 1807; *Galeorhinus vitaminicus* de Buen, 1950; *Galeus vulgaris* Fleming, 1828; *Galeorhinus zyopterus* Jordan & Gilbert, 1883

Conservation status: Vulnerable A2bd+3d+4bd

Genus: ***Hemitriakis*** Herre, 1923

22. ***Hemitriakis japanica*** (Müller & Henle, 1839)

Galeus japanicus Müller & Henle, 1839: 58, pl. 22 (type locality: Japan)

Common names: En - Japanese topeshark; Ru - Yaponskaya supovaya akula; Jp - Eiraku-buka; Cz - Psohlav japonský

Distribution: Northwestern Pacific. Japan, southern Korean Peninsula, China and around Taiwan (Lindberg and Legeza, 1959; Compagno, 1984; Kamura and Hashimoto, 2004; White, 2009; Ebert at al., 2013). There has been no record from the coast of Russia. Marine species.

Remarks: Records of this species from off the coast of New Caledonia and Indonesia are probably erroneous (White, 2009). In the past, this species was belonged to the genus *Galeus* or *Galeorhinus* (e.g., Lindberg and Legeza, 1959; Gubanov et al., 1986).

Conservation status: Least Concern

Subfamily: **Triakinae** Gray, 1851
(En - Hound sharks; Ru - Kun'i akuly; Jp - Dochizame-aka)

Genus: ***Mustelus*** Linck, 1790

23. ***Mustelus griseus*** Pietschmann, 1908

Mustelus griseus Pietschmann, 1908: 132 (type locality: Japan)

Common names: En - Spotless smooth-hound; Ru - Seraya kun'ya akula; Jp - Shiro-zamé; Cz - Hladkoun šedý

Distribution: Northwestern Pacific. Around Japan (from Hokkaido Island) and from Sea of Japan, coast of Korean Peninsula southward to Vietnam, including China and Taiwan (Lindberg and Legeza, 1959; Compagno, 1984; Gubanov et al., 1986; Carpenter and Niem, 1998; Kamura and Hashimoto, 2004; Ebert et al., 2013; Shinohara et al., 2014). This species has not been recorded from Russian water. Marine species.

Remarks: Compagno et al. (2005) listed *Mustelus* cf. *griseus* as Philippine grey smooth-hound in the list of

species from the waters of Philippines. That species is most probably an undescribed species.

Conservation status: Data Deficient

24. ***Mustelus manazo*** Bleeker, 1854

Mustelus manazo Bleeker, 1854: 126 (type locality: Nagasaki, Japan), or Compagno (1984: 416) and Compagno et al. (2005: 32) indicated this species as "*Mustelus manazo* Bleeker, 1854: 422 (type locality: Nagasaki Market, Japan)". Lindberg and Legeza (1959: 63) indicated that the original description for this species was «Bleeker, 1857».

Common names: En - Starspotted smooth-hound; Ru - Yaponskaya kun'ya akula; Jp - Hoshi-zamé; Cz - Hladkoun manazo

Distribution: Indo-Pacific. Around Japan (from Hokkaido Island), also Sea of Japan, Yellow Sea, East China Sea and South China Sea, from Vladivostok (the coast of Primorsky Krai, Russia) to Korean Peninsula southward to Vietnam, including China and around Taiwan (Schmidt, 1904; Lindberg and Legeza, 1959; Compagno, 1984; Amaoka et al., 1989; Yamaguchi et al., 2000; Randall and Lim, 2000; Sokolovsky et al., 2007, 2011; Dolganov, 2011; Ebert et al., 2013). Russian area: Sea of Japan, from Vladivostok and to southern (Lindberg and Legeza, 1959; Parin, 2001; Sokolovsky et al., 2007, 2011; Dolganov, 2011). Marine species.

Remarks: Compagno et al. (2005) listed *Mustelus* cf. *manazo* as Philippine white-spotted smooth-hound in the list of species from the waters of Philippines. It is most probably an undescribed species.

Conservation status: Data Deficient

Genus: ***Triakis*** Müller & Henle, 1838

25. ***Triakis scyllium*** Müller & Henle, 1839

Triakis scyllium Müller & Henle, 1839: 63, pl. 26 (type locality: Japan)

Common names: En - Banded hound shark; Ru - Ostrozubaya kun'ya akula; Jp - Dochi-zamé; Cz - Hladkoun žralokovitý

Distribution: Northwestern Pacific. Japan (throughout the archipelago), Korean Peninsula, China, Taiwan and probably Philippines (Lindberg and Legeza, 1959; Compagno, 1984; Carpenter and Niem, 1998: 1301; Compagno et al., 2005; Ebert et al., 2013). Russian area: only one specimen from the Peter the Great Bay, Sea of Japan (Lindberg and Legeza, 1959; Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011). Marine species.

Remarks: The spelling of the specific name «*scyllia*» is incorrect (see Eschmeyer, 2014).

Synonyms: *Hemigaleus pingi* Evermann & Shaw, 1927

Conservation status: Least Concern

Family: **Carcharhinidae** Jordan & Evermann, 1896

(En - Requiem sharks; Ru - Serye akuly; Jp - Mejiro-zamé-ka; Cz - Modrounovití)

Genus: ***Carcharhinus*** Blainville, 1816

26. ***Carcharhinus brachyurus*** (Günther, 1870)

Carcharias brachyurus Günther, 1870: 369 (type locality: Wanganui, New Zealand)

Common names: En - Copper shark; Ru - Korotkohvostaya seraya akula; Jp - Kuro-heri-mejiro-zamé; Cz - Žralok měděný

Distribution: Nearly in all temperate, subtropical and tropical seas. Russian area: the Peter the Great Bay, Sea of Japan, where last capture was dated 1936 (Lindberg and Legeza, 1959; Compagno, 1984; Parin, 2001; Sokolovsky et al., 2007, 2011). Marine and brackish species.

Remarks: The type locality is a collection site of the neotype designated by Garrick (1982).

Synonyms: *Eulamia ahenea* Stead, 1938; *Carcharinus improvisus* Smith, 1952; *Carcharias lamiella* Jordan & Gilbert, 1882; *Carcharhinus remotoides* Deng, Xiong & Zhan, 1981; *Carcharhinus rochensis* Abella, 1972

Conservation status: Near Threatened

27. ***Carcharhinus plumbeus*** (Nardo, 1827)

Squalus plumbeus Nardo, 1827: 26, 35 (type locality: Adriatic Sea)

Common names: En - Sandbar shark; Ru - Svintsovaja akula; Jp - Mejiro-zamé; Cz - Žralok hnědý

Distribution: Circumglobal in tropical and temperate seas. Russian area: several specimens were known from Peter the Great Bay, Sea of Japan and south-western Sakhalin Island (Lindberg and Legeza, 1959, as *Glyphis gangeticus* (Müller & Henle, 1839); Sokolovsky et al., 2007, 2011). Marine and brackish species.

Remarks: No information is available on type specimens (see Eschmeyer, 2014). In the past, Lindberg and Legeza (1959) and Rass (1983) reported this species from the water of Russia in the Peter the Great Bay and near western Sakhalin Island as *Glyphis gangeticus* (Müller & Henle, 1839). According to some data, *Carcharias (Prionodon) japonicus* is a synonym of *Carcharhinus plumbeus* (Nardo, 1827) (e.g., Compagno, 1984; Sokolovsky et al., 2011; Eschmeyer, 2014) or it was synonymized with *Glyphis gangeticus* (Müller & Henle, 1839), e.g., Lindberg and Legeza (1959) and Rass (1983). Besides under the recent molecular data, the western Atlantic populations are distinct from Indo-Pacific populations and for the region Indo-Pacific, it is necessary to restore name *Carcharhinus japonicus* (Temminck & Schlegel, 1850), e.g., Ebert et al. (2013). In the case when *C. japonicus* considered as a separate species, specimens for Russian waters should be specified as *C. japonicus* and not as *Carcharhinus plumbeus*.

Synonyms: *Squalus caecchia* Nardo, 1847; *Lamna caudata* DeKay, 1842; *Carcharias ceruleus* DeKay, 1842; *Galeolamna dorsalis* Whitley, 1944; ?*Carcharias (Prionodon) japonicus* Temminck & Schlegel, 1850; *Carcharias (Prionodon) milberti* Müller & Henle, 1839; *Carcharias obtusirostris* Moreau, 1881; *Carcharias stevensi* Ogilby, 1911

Conservation status: Vulnerable A2bd+4bd

Genus: ***Prionace*** Cantor, 1849

28. ***Prionace glauca*** (Linnaeus, 1758)

Squalus glaucus Linnaeus, 1758: 235 (type locality: «in Oceano Europeo»)

Common names: En - Blue shark; Ru - Golubaya akula; Jp - Yoshikiri-zamé; Cz - Žralok modrý

Distribution: In all tropical and temperate waters. Western Atlantic: from Newfoundland to Argentina (Compagno, 1984; Ebert and Stehmann, 2013), perhaps, comes into the Gulf of Mexico and Caribbean Sea (Compagno, 1984). The central and eastern parts of the Atlantic Ocean and adjacent Arctic: from Norwegian part of Barents Sea (from the Russian part of Barents Sea, this species has not been recorded (pers. comm. by A.V. Dolgov) to South Africa, including North Sea, Baltic Sea (western part), Mediterranean Sea and Black Sea (Compagno, 1984; Dolgov, 2000; Serena, 2005; Fricke, 2007; Karamushko, 2008; Kontula and Haldin, 2012). Indo-western Pacific: South Africa and southern Arabian Sea to Indonesia, Japan (to Pacific coast of Hokkaido Island), Australia, New Caledonia and New Zealand (Compagno, 1984; Amaoka et al., 1989). Northeastern and eastern parts of Pacific Ocean: from northern Gulf of Alaska near Kodiak Island (U.S.A.) to Chile, including Gulf of California (Quast and Hall, 1972; Compagno, 1984; Love et al., 2005; Stevenson et al., 2007). Russian area: Peter the Great Bay, Sea of Japan, Pacific coast of Kuril Islands and southeastern Kamchatka (Savinykh, 1998; Ivankov and Ivankova, 1998; Sheiko and Fedorov, 2000; Parin, 2001; Ivanov and Sukhanov, 2002; Love et al., 2005; Sokolovsky et al., 2007, 2011) and probably Barents Sea. Marine species.

Remarks: No information is available on type specimens (see Eschmeyer, 2014).

Synonyms: *Squalus adscensionis* Osbeck, 1765; *Carcharias gracilis* Philippi, 1887; *Carcharias hirundinaceus* Valenciennes in Müller & Henle, 1839; *Prionace mackiei* Phillipps, 1935; *Carcharias pugae*

Pérez Canto, 1886; *Thalassorhinus vulpecula* Valenciennes in Müller & Henle, 1839

Conservation status: Near Threatened

Family: **Sphyrnidae** Gill, 1872

(En - Hammerhead sharks; Ru - Molotogolovye akuly; Jp - Shumoku-zamé-ka; Cz - Kladivounovití)

Genus: ***Sphyrna*** Rafinesque, 1810

29. ***Sphyrna zygaena*** (Linnaeus, 1758)

Squalus zygaena Linnaeus, 1758: 234 (type locality: «in Europa, America»)

Common names: En - Smooth hammerhead; Ru - Obyknovennaya akula-molot; Jp - Shiro-shumoku-zamé; Cz - Kladivoun obecný

Distribution: Probably cosmopolitan, mostly in temperate and tropical waters. Russian area: the coast of Sea of Japan from Peter the Great Bay northward to Tatar Strait (Lindberg and Legeza, 1959; Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011), also Sea of Okhotsk (Grigorov and Orlov, 2013); probably the Pacific side of southern Kurils. Northeastern Atlantic: most close record from waters of Russia is western part of Baltic Sea and Black Sea (the coast of Romania) (Vasil'eva, 2007; Kontula and Haldin, 2012). Marine and brackish species.

Synonyms: *Zygaena malleus* Valenciennes, 1822; *Zygaena subarcuata* Storer, 1848; *Zygaena vulgaris* Cloquet, 1830

Conservation status: Vulnerable A2bd+3bd+4bd

Order: **Squaliformes** Goodrich, 1909

(En - Dogfish sharks; Ru - Katranoobraznye; Jp - Tsuno-zamé-moku; Cz - Ostrouni)

Family: **Dalatiidae** Gray, 1851

(En - Kitefin sharks; Ru - Dalatievye akuly; Jp - Yoroi-zamé-ka; Cz - Světlanovití)

Genus: ***Isistius*** Gill, 1865

30. ***Isistius brasiliensis*** (Quoy & Gaimard, 1824)

Scymnus brasiliensis Quoy & Gaimard, 1824: 198 (type locality: Brazil)

Common names: En - Cookiecutter shark; Ru - Brazil'skaya svetyashchayasya akula; Jp - Daruma-zamé; Cz - Žraloček brazilský

Distribution: Circumglobal in all warm seas, including Hawaiian Islands (Compango, 1984; Love et al., 2005; Papastamatiou et al., 2010). According to Nakano and Tabuchi (1990) in the North Pacific, this species occurs from 23°N to 38°30'N and from 146°E to 131°W. Russian area: extremely rare near Pacific coast of Kuril Islands (Savinykh, 1998; Parin, 2001; Ivanov and Sukhanov, 2002). Marine species.

Remarks: According to Burdin et al. (2007: 8), possibly the range of this species in the waters of Asia stretches from coast of Chukotka and Gulf of Anadyr southward to eastern Kamchatka and Japan.

Synonyms: *Leius ferox* Kner, 1864; *Squalus fulgens* Bennett, 1840; *Isistius labialis* Meng, Zhu & Li, 1985; *Scymnus (Scymnus) brasiliensis* var. *torquatus* Müller & Henle, 1839; *Scymnus (Scymnus) brasiliensis* var. *unicolor* Müller & Henle, 1839

Conservation status: Least Concern

Family: Etmopteridae Fowler, 1934

(En - Lantern sharks; Ru - Etmopterovye; Jp - Karasu-zamé-ka; Cz - Světlounovití)

Genus: ***Centroscyllium*** Müller & Henle, 1841

31. ***Centroscyllium ritteri*** Jordan & Fowler, 1903

Centroscyllium ritteri Jordan & Fowler, 1903: 635, fig. 6 (type locality: Misaki, Japan)

Common names: En - Whitefin dogfish; Ru - Beloperaya sobach'ya akula; Jp - Kasumi-zamé; Cz - Světloun Ritterův

Distribution: Northwestern Pacific. Pacific coasts of Hokkaido and Honshu islands, Japan (Compagno, 1984; Amaoka et al., 1989; Nakaya and Shirai, 1992; Fujita et al., 1993; Shinohara et al., 2009). Russian area: it was known only one specimen from near Pacific side of the southern Kuril Islands (Fedorov and Parin, 1998; Parin, 2001) and probably northern Kuril Islands (Sheiko and Fedorov, 2000). Marine species.

Conservation status: Data Deficient

Genus: ***Etmopterus*** Rafinesque, 1810

32. ***Etmopterus lucifer*** Jordan & Snyder, 1902

Etmopterus lucifer Jordan & Snyder, 1902: 79, fig. 1 (type locality: Misaki, Japan)

Common names: En - Blackbelly lanternshark; Ru - Svetyashchayasya chernobryukhaya akula; Jp - Fuji-kujira; Cz - Světloun svítivý

Distribution: Currently the range of this species is limited to Northwestern Pacific (Ebert and Schaaf-DaSilva, 2009; Ebert et al. 2011). The closest occurrence from Russian waters is Hokkaido Island and northern Honshu Island, Japan (Amaoka et al., 1989; Nakaya and Shirai, 1992; Fujita et al., 1993; Shinohara et al., 2009). Marine species.

Remarks: Now this genus is composed of 32 valid taxa, including the newly described and restored species, which in the past are placed within one species *Etmopterus lucifer*, as, for example, in work Yamakawa et al. (1986), also see Compagno et al. (2005), Ebert and Schaaf-DaSilva (2009), Ebert et al. (2011, 2013).

Synonyms: *Etmopterus abernethyi* Garrick, 1957

Conservation status: Least Concern

33. ***Etmopterus spinax*** (Linnaeus, 1758)

Squalus spinax Linnaeus, 1758: 233 (type locality: Genoa, Italy, Mediterranean Sea [«in Europa»])

Common names: En - Velvet belly lanternshark; Ru - Chernaya kolyuchaya akula; Jp - Kurohara-kasumi-zamé; Cz - Světloun trnitý

Distribution: Eastern Atlantic and adjacent Arctic. From Norway and Iceland to central part of the South Africa including Azoreses and Cape Verde, also western Baltic Sea and Mediterranean Sea (Compagno, 1984; Fricke et al., 2007; Kontula and Haldin, 2012; Ebert and Stehmann, 2013). The closest occurrence from Russian waters is the coast of northern Norway, Barents Sea (Gratzianov, 1907; Williams et al., 2008; Wienerroither et al., 2011a, 2013). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Etmopterus aculeatus* Rafinesque, 1810; *Spinax gunneri* Reinhardt, 1825; *Spinax linnei* Malm, 1877; *Squalus niger* Broussonet, 1788; ?*Spinax vitulinus* de la Pylaie, 1835

Conservation status: Least Concern

Family: **Somniosidae** Jordan, 1888

(En - Sleeper sharks; Ru - Polyarnye akuly; Jp - Onden-zamé-ka; Cz - Světlošovití)

Genus: ***Somniosus*** Lesueur, 1818

34. ***Somniosus microcephalus*** (Bloch & Schneider, 1801)

Squalus microcephalus Bloch & Schneider, 1801: 135 (type locality: Arctic Ocean [«in mari glaciali»])

Common names: En - Greenland sleeper shark; Ru - Polyarnaya akula; Jp - Nishi-onden-zamé; Cz - Světloš malohlavý

Distribution: Northern and southern parts of Atlantic Ocean including Arctic and Antarctic (Wienerroither et al., 2013). Russian area: Barents Sea (including Franz Josef Land), White Sea and Kara Sea (Gratzianov, 1907; Berg, 1911; Essipov, 1952; Andriashev, 1954; Altukhov et al. 1958; Borkin 1983; Compagno, 1984; Dolgov, 2000, 2013; Parin, 2001; Gritsenko et al., 2006; Wienerroither et al., 2011a, 2013; Dolgov et al., 2011). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Squalus borealis* Scoresby, 1820; *Somniosus brevipinna* Lesueur, 1818; *Leiodon echinatum* Wood, 1846; *Scymnus glacialis* Faber, 1829; *Scymnus gunneri* Thienemann, 1828; *Scymnus micropterus* Valenciennes, 1832; *Squalus norvegianus* Blainville, 1825

Conservation status: Near Threatened

35. ***Somniosus pacificus*** Bigelow & Schroeder, 1944

Somniosus pacificus Bigelow & Schroeder, 1944: 35 (type locality: Sagami Sea, Japan)

Common names: En - Pacific sleeper shark; Ru -Tikhookeanskaya polyarnaya akula; Jp - Onden-zamé; Cz - Světloš pacifický

Distribution: North Pacific and adjacent Arctic. Taiwan, Pacific coast of Japan (Hokkaido Island and northern Honshu Island), also Sea of Japan, Okhotsk Sea and Bering Sea, including Taui Bay (the coast of the Magadan Oblast, Russia), Sakhalin Island, Kurils and Komandor-Aleutian chain and on Pacific coast of North America to Baja California, Mexico (Gubanov et al., 1986; Fedorov and Parin, 1998; Amaoka et al., 1989; Sheiko and Fedorov, 2000; Balanov, 2000; Parin, 2001; Benz et al., 2003; Love et al., 2005; Chereshnev et al., 2005; Rooper and Wilkins, 2008; Shinohara et al., 2009, 2014; Ebert et al., 2013; Orlov and Baitalyuk, 2014); Arctic coast of Alaska in the eastern part of Chukchi Sea (Benz et al., 2003; Stevenson et al., 2007; Mecklenburg et al., 2011); probably East Siberian and Beaufort seas (Love et al., 2005; Chereshnev and Kirillov, 2007); juvenile specimens from Arctic waters of Greenland (Hussey et al. 2014). Marine species.

Remarks: According to data by Yano et al. (2004), the genus *Somniosus* is composed of two subgenera *Somniosus* and *Rhinoscymnus* and includes 5 species. In the subgenus *Somniosus* including the 3 species, two are known from the Northern Hemisphere, and the third from the waters of the Antarctic in the Southern Hemisphere: *Somniosus (Somniosus) microcephalus*, *S. (Somniosus) pacificus* and *S. (S.) antarcticus*. The subgenus *Rhinoscymnus* represented by two species: *S. (Rhinoscymnus) rostratus* from the Northeastern Atlantic and the Mediterranean Sea, and this taxon is a senior synonym of *Somniosus bauchotae* Quéro, 1976 and *S. (Rhinoscymnus) longus* from the western part of Pacific Ocean (it is noted off the coast of Japan and New Zealand), which is usually considered in synonymy with *Somniosus rostratus* (Risso, 1827).

Conservation status: Data Deficient

Family: **Squalidae** Blainville, 1816

(En - Dogfish sharks; Ru - Katranovye; Jp - Tsuno-zamé-ka; Cz - Ostrounovití)

Genus: ***Squalus*** Linnaeus, 1758

36. ***Squalus acanthias*** Linnaeus, 1758

Squalus acanthias Linnaeus, 1758: 233 (type locality: Mediterranean Sea and northeastern Atlantic [«in Oceano Europæo»])

Common names: En - Piked dogfish; Ru - Korotkoperaya kolyuchaya akula; Cz - Ostroun obecný

Distribution: Atlantic and adjacent Arctic, excluding tropical areas. Russian area: the northwestern part of

Pacific Ocean (but currently as *Squalus suckleyi*) - coast of Sakhalin Island, the Primorsky Krai, Kuril Islands and Kamchatka (from western part of Bering Sea northward to the Cape Navarin, including Komandor Islands) and in the Atlantic Ocean basin (currently as *Squalus acanthias*) - in the Black Sea and Azov Sea, including Strait of Kerch, also in the Arctic region in the Barents Sea and White Sea (Gratzianov, 1907; Berg, 1911; Andriashev, 1954; Lindberg and Legeza, 1959; Svetovidov, 1964; Sheiko and Fedorov, 2000; Dolgov, 2006, 2011; Vasil'eva, 2007; Sokolovsky et al., 2007, 2011; Balanov et al., 2010; Orlov et al., 2011, 2012a, 2012b; Ebert and Stehmann, 2013); the Baltic Sea (Gratzianov, 1907), and probably Baltic Sea, see George and Zidowitz (2006), Kontula and Haldin (2012). Marine species.

Remarks: According Ebert et al. (2010), Orlov et al. (2012a, 2012b) and Ebert and Stehmann (2013), the taxon *Squalus suckleyi* (Girard, 1855) is a separate species, with distribution in the North Pacific from Korean Peninsula and Japan to Arctic waters of Chukchi Sea and on the North American coast to southern California, U.S.A. In the Black Sea, a separate subspecies *Squalus acanthias ponticus* Myagkov & Kondyurin, 1986, was recorded, but is usually considered that it is not a subspecies (see Parin, 2001; Vasil'eva, 2007; Eschmeyer, 2014).

Synonyms: *Squalus acanthias africana* Myagkov & Kondyurin, 1986; *Acanthias americanus* Storer, 1846; *Squalus barbouri* Howell Rivero, 1936; *Squalus acanthias chilensis* Suckow, 1799; *Acanthias commun* Navarrete, 1898; *Squalus fernandinus* Molina, 1782; *Squalus kirki* Phillipps, 1931; *Acanthias lebruni* Vaillant, 1888; *Acanthias linnei* Malm, 1877; *Spinax mediterraneus* Gistel, 1848; *Squalus acanthias ponticus* Myagkov & Kondyurin, 1986; *Squalus tasmaniensis* Howell Rivero, 1936; *Acanthias vulgaris* Risso, 1827; *Acanthias vulgaris* Bonaparte, 1846; *Squalus whitleyi* Phillipps, 1931

Conservation status: Vulnerable A2bd+3bd+4bd

37. ***Squalus mitsukurii*** Jordan & Snyder, 1903

Squalus mitsukurii Jordan & Snyder in Jordan & Fowler, 1903: 629 (type locality: Misaki, Japan)

Common names: En - Shortspine dogfish; Ru - Kolyuchaya akula Mitsukuri; Jp - Futo-tsuno-zamé; Cz - Ostroun krátkotrnný

Distribution: In the all tropical seas to cold waters of temperate zone (Oddone et al., 2010). The closest occurrence from Russian waters is the Korean Peninsula, Sea of Japan and on Pacific coast of Hokkaido Island (Tomakomai, see Online: http://collections.si.edu/search/results.htm?q=record_ID:nmnhvz_5022779) and northern Honshu Island, Japan (Compagno, 1984; Shinohara et al., 2009, 2011, 2014). Marine species.

Remarks: More research is needed for distribution and systematization of *S. mitsukurii*, because, in the past, the name of this species included a number of others taxa (Wilson and Seki, 1994; Cavanagh et al. 2007; Kyne et al., 2012).

Conservation status: Data Deficient

38. ***Squalus suckleyi*** (Girard, 1855)

Spinax (Acanthias) suckleyi Girard, 1855: 196 (type locality: Hood Channel, Puget Sound, Washington, U.S.A., 47°22'N, 123°05'W)

Common names: En - North Pacific spiny dogfish; Ru - Severotikhookeanskaya kolyuchaya akula; Jp - Abura-tsuno-zamé; Cz - Ostroun Suckleyův

Distribution: North Pacific and adjacent Arctic. From Korean Peninsula, Japan and Sakhalin Island to Chukchi Sea (Alaska) and Gulf of Anadyr (Russia), including Komandor-Aleutian chain and on Pacific coast of North America to California, U.S.A. (Schmidt, 1904: 336; Gratzianov, 1907: 29; Ebert et al., 2010; Orlov et al., 2012a, 2012b). Marine species.

Remarks: The type locality is a collection site of the neotype designated by Ebert et al. (2010). In the past, specimens from Sakhalin Island and North Pacific region were identified as *Squalus acanthias* Linnaeus, 1758 (e.g., Lindberg and Legeza, 1959; Sokolovsky et al., 2007, 2011; and others). But now according to new data, it is identified as *Squalus suckleyi*, e.g., Ebert et al. (2010), Orlov et al. (2012a, 2012b), Grigorov and Orlov

(2013).

Conservation status: According to Grigorov and Orlov (2013) it is given only as «Endangered».

Order: **Squatiniformes** Jordan, 1923
(En - Angel sharks; Ru - Skvatinoobraznye; Jp - Kasu-zamé-moku; Cz - Polorejnoci)

Family: **Squatinidae** Bonaparte, 1838
(En - Angel sharks; Ru - Skvatinovye; Jp - Kasu-zamé-ka; Cz - Polorejnokovití)

Genus: ***Squatina*** Dumeril, 1806

39. ***Squatina japonica*** Bleeker, 1858

Squatina japonica Bleeker, 1858: 40 (type locality: Nagasaki, Japan)

Common names: En - Japanese angelshark; Ru - Yaponskij morskoj angel; Jp - Kasu-zamé; Cz - Polorejnok japonský

Distribution: Northwestern Pacific. Pacific coast of Japan, also Sea of Japan and Yellow Sea including Taiwan and probably along the coast of Philippines (Compagno, 1984; Gubanov et al., 1986; Compagno et al., 2005; Ebert et al., 2014; Shinohara et al., 2014). Russian area: Peter the Great Bay, Sea of Japan (Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011). Marine species.

Remarks: Specimens from the waters of Philippines were described as a new species *Squatina caillieti* Walsh, Ebert & Compagno, 2011, which is probably a replace name for *Squatina japonica* in the specified area (Walsh et al., 2011).

Conservation status: Vulnerable A2d+4d

40. ***Squatina squatina*** (Linnaeus, 1758)

Squalus squatina Linnaeus, 1758: 233 (type locality: Mediterranean Sea and northeastern Atlantic [«in Oceano Europæo»])

Common names: En - Angelshark; Ru - Morskoj angel; Jp - Hon-kasu-zamé; Cz - Polorejnok křídlatý

Distribution: Eastern Atlantic. From Norway to Canary Islands and western Sahara, including North Sea, western Baltic Sea, Mediterranean Sea, Aegean Sea, Marmara Sea and Black Sea (the coast of Turkey) (Fricke, 2007; Fricke et al., 2007; Vasil'eva, 2007; Kontula and Haldin, 2012; Ebert and Stehmann, 2013). No record from Russian waters. Marine species.

Synonyms: *Cestracion angelorum* Swainson, 1838; *Squatina angelus* Gronow in Gray 1854; *Squatina europaea* Swainson, 1839; *Squatina laevis* Cuvier, 1816; *Squatina vulgaris* Risso, 1810

Conservation status: Critically Endangered 2bcd+3d+4bcd

Order: **Torpediniformes** Buen, 1926
(En - Electric rays; Ru - Elektricheskie skaty; Jp - Yamato-shibire-éi-moku; Cz - Parejnoci)

Family: **Narkidae** Fowler, 1934
(En - Sleeper rays; Ru - Narkovye; Jp - Shibire-éi-ka; Cz - Narkovití)

Genus: ***Narke*** Kaup, 1826

41. ***Narke japonica*** (Temminck & Schlegel, 1850)

Torpedo (Astrape) japonica Temminck & Schlegel, 1850: 307, pl. 140 (type locality: Japan)

Common names: En - Japanese sleeper ray; Ru - Yaponskaya narka; Jp - Shibire-ei; Cz - Narcina japonská

Distribution: Northwestern Pacific. Japan, Korean Peninsula, China and Taiwan including Sea of Japan

and South China Sea (Carvalho and McCord, 2009; Ebert et al., 2013; Shinohara et al., 2014). The closest occurrence from Russian waters is the southern part of Sea of Japan, near Hyogo Prefectures, Honshu Island, Japan (Shinohara et al., 2011). Marine species.

Remarks: The lectotype was designated by Boeseman (1947) (Eschmeyer, 2014)

Synonyms: ?*Crassinarke dormitor* Takagi, 1951, see note by Ebert et al. (2013).

Conservation status: Vulnerable A2d+3d+4d

Family: **Torpedinidae** Bonaparte, 1838

(En - Electric rays or torpedoes; Ru - Elektricheskie skaty; Jp - Yamato-shibire-éi-ka; Cz - Parejnokovití)

Genus: ***Tetronarce*** Gill, 1862

42. ***Tetronarce tokionis*** (Tanaka, 1908)

Tetronarcine tokionis Tanaka, 1908: 2, fig. (type locality: Tokyo fish market, Japan)

Common names: En - Japanese pelagic torpedo; Ru - Tokiyskij elektricheskij skat; Jp - Yamato-shibire-éi; Cz - Parejnok tokijský

Distribution: Northwestern Pacific and eastern Indian Ocean including Australia (Ebert, 2014). The closest occurrence from Russian waters is Pacific coasts of Hokkaido Island and northern Honshu Island, Japan (Ueno and Abe, 1966b; Amaoka et al., 1989; Nakaya and Shirai, 1992; Shinohara et al., 2009). Marine species.

Remarks: This species is usually assigned to the genus *Torpedo*, but Ebert et al. (2013) and Ebert (2014) placed this species in the genus *Tetronarce*. From waters of Taiwan, the new species *Torpedo formosa* Haas & Ebert, 2006 - Taiwanese pelagic torpedo was described, which in the past was misidentified as *Torpedo tokionis*, see Haas and Ebert (2006), Ebert et al. (2013).

Conservation status: Data Deficient

Order: **Rajiformes** Müller & Henle, 1841

(En - Skates; Ru - Skatoobraznye; Jp - Ganngi- éi-moku; Cz - Rejnoci)

Family: **Rhinobatidae** Müller & Henle, 1837

(En - Guitarfish; Ru- Rokhlevye skaty; Jp - Sakatazamé-ka; Cz - Pilohřbetovití)

Subfamily: **Rhininae** Müller & Henle, 1841

(En - Shark rays or bowmouth guitarfish; Ru – Akulokhvosty; Jp –Shinonome-Sakatazamé)

Genus: ***Rhina*** Bloch & Schneider, 1801

43. ***Rhina ancylostoma*** Bloch & Schneider, 1801

Rhina ancylostomus Bloch & Schneider, 1801: 352, pl. 72 (type locality: Coromandel, India)

Common names: En - Shark ray or bowmouth guitarfish; Ru - Akulij skat; Jp - Shinonome-sakatazame; Cz - Kytarovec křivoústý

Distribution: Indo-Pacific. The closest occurrence from Russian waters is Pacific Ocean in the northern Japan, southern Hokkaido Island (Amaoka et al., 1989). But this record should be confirmed, because this species usually occurs more south waters. Marine species.

Conservation status: Vulnerable A2bd+3bd+4bd

Family: **Arhynchobatidae** Fowler, 1934

(En - Softnose skates; Ru - Bezrylye skaty; Jp - Hitotsu-sebire-kasube-ka; Cz - Rejnokovcovití)

Genus: ***Arctoraja*** Ishiyama, 1958

44. ***Arctoraja panthera*** (Orr, Stevenson, Hoff, Spies & McEachran, 2011)

Bathyraja (Arctoraja) panthera Orr, Stevenson, Hoff, Spies & McEachran, 2011: 29, figs. 2–6, 10-18; tabl. 1-9 (type locality: western Aleutian Islands, 53.1124°N, 170.9038°E, U.S.A.)

Common names: En - Aleutian leopard skate; Ru - Leopardovyj skat; Jp - Moyou-kita-tsuno- kasubé; Cz - Rejnok leopardí

Distribution: Western part of the Aleutian Islands, between 170°E and 179°W, U.S.A. (Stevenson et al., 2007; Spies et al., 2011; Orr et al., 2011). Marine species.

Remarks: According to Stevenson et al. (2011), the subgenus *Arctoraja* is including 4 valid species: *Bathyraja (Arctoraja) panthera*, *Bathyraja (Arctoraja) simoterus*, *Bathyraja (Arctoraja) smirnovi* and *Bathyraja (Arctoraja) parmifera*. This is confirmed by the works of Spies et al. (2011) and Orr et al. (2011). However, subgenus *Arctoraja* is distinguished from the genus *Bathyraja* by the clasper structure (without pseudosiphon) and egg capsule morphology (smooth surface of capsule), and by molecular data (Spies et al. 2011; Orr et al. 2011). Considerable differences in the subgenus *Arctoraja* from the genus *Bathyraja* allow to consider the subgenus *Arctoraja* as a separate genus, that we accepted in this paper (also, pers. comm. by H. Ishihara).

Conservation status: Unestablished

45. ***Arctoraja parmifera*** (Bean, 1881)

Raia parmifera Bean, 1881: 157 (type locality: Iliuliuk, Unalaska Island, Aleutian Islands, Alaska, U.S.A)

Common names: En - Alaska skate or armored skate; Ru - Shhitonosnyj skat; Jp - Kita-tsuno- kasubé; Cz - Rejnok aljašský

Distribution: Currently the range of this species is limited to Northeastern Pacific, Bering Sea and Aleutian Islands, including eastern Kamchatka and Komandor-Aleutian chain (e.g., Stevenson et al., 2007, 2008; Orr et al. 2011), also on several specimens noted for Arctic Alaska, in the southeastern Chukchi Sea near Kivalina and Point Hope (Mecklenburg et al., 2002, 2011). Distribution in other areas should be clarified. Marine species.

Remarks: *Raja stellulata* was recorded from the following areas: Bering Sea and Unalaska Island (Aleutian Islands) and Pacific coast of North America to Baja California, Mexico (Schmidt, 1904; Gratzianov, 1907; Quast and Hall, 1972; Eschmeyer and Herald, 1983; Allen and Smith, 1988). However, more recent records for this species (Mecklenburg et al., 2002; Love et al., 2005; Robinson et al., 2009; McFarlane et al., 2010) indicated that *R. stellulata* is not distributed in Bering Sea, Gulf of Alaska and partly British Columbia, and Canada. This suggests that the previous records are incorrect due to misidentification and they were most probably identified as *Bathyraja parmifera*.

In the past, this species was assgned to the genus *Breviraja* or *Raja*, e.g., Kobayashi and Ueno (1956), Sasaki (1972), Quast and Hall (1972). According to recent study by Orr et al. (2011), this species was placed in the restored subgenus *Arctoraja*. Otherwise, by the opinion by H. Ishihara, this species should be placed in the genus *Arctoraja*.

According to Sheiko and Fedorov (2000) and Parin (2001), the taxon *Rhinoraja rosispinis* (Gill & Townsend, 1897) – pink skat or flathead skate, as identified as this species from eastern Bering Sea, should be placed in synonymy of *Amblyraja hyperborea* (Collett, 1879). Furthermore, Mecklenburg et al. (2002) and Parin et al. (2014) regarded that *Rhinoraja rosispinis* is a synonym of *Arctoraja parmifera*.

Synonyms: *Raia rosispinis* Gill & Townsend, 1897; *Raia obtusa* Gill & Townsend, 1897

Conservation status: Least Concern

46. ***Arctoraja simoterus*** (Ishiyama, 1967)

Breviraja (Arctoraja) simoterus Ishiyama, 1967: 62, fig. (type locality: Muroran, Hokkaido, Japan)

Common names: En - Hokkaido skate; Ru - Khokkaydskij skat; Jp - Tsuno- kasubé; Cz - Rejnok hokkaidský

Distribution: Northwestern Pacific. Pacific and Okhotsk sides of Hokkaido Island, Japan (Orr et al., 2011). The closest occurrence from Russian waters is the Okhotsk coast of Hokkaido Island, northern Japan (Orr et al., 2011). Marine species.

Remarks: In the past, Mecklenburg et al. (2002) and Dolganov and Korolev (2006) claimed that this taxon was a junior synonym of *Bathyraja parmifera* (Bean, 1881). However, at the present, this taxon is regarded as a valid species (Spies et al., 2011; Orr et al., 2011) in the subgenus *Arctoraja* (see Orr et al., 2011), or in accordance with H. Ishihara in the genus *Arctoraja*.

Conservation status: Unestablished

47. ***Arctoraja smirnovi*** (Soldatov & Pavlenko, 1915)

Raja smirnovi Soldatov & Pavlenko, 1915: 162, pl. 5 (type locality: Peter the Great Bay, Sea of Japan, Russia)

Common names: En - Smirnov's skate; Ru - Skat Smirnova; Jp - Dobu- kasubé; Cz - Rejnok Smirnovův

Distribution: Northwestern Pacific. It is known from near Pacific side of Hokkaido Island (from the northeastern part), Japan (Yamauchi et al., 2008; Orr et al., 2011), Taiwan Strait (the coast of China), also Yellow Sea, Sea of Japan (from Hokkaido Island), Okhotsk Sea and Bering Sea (Lindberg and Legeza, 1959; Quast and Hall, 1972; Ishiyama and Ishihara, 1977: 88, in comparative materials from the Bering Sea; Nakaya and Shirai, 1992; Shinohara et al., 2011; Orr et al., 2011; Li et al., 2012; Shinohara et al., 2014; Tohkairin et al., 2015). Russian area: Peter the Great Bay, Tatar Strait, southern Sakhalin Island and Kuril Island (Lindberg and Legeza, 1959; Orr et al., 2011; Shinohara et al., 2011). Marine species.

Remarks: In the past, several authors (e.g., Parin, 2001; Mecklenburg et al., 2002; Dolganov and Korolev, 2006) claimed that this taxon was a junior synonym of *Bathyraja parmifera* (Bean, 1881). According to recent data, it is a valid species in the subgenus *Arctoraja* (see Orr et al., 2011), or in the opinion by H. Ishihara in the genus *Arctoraja*, but it is usually assigned to a genus *Bathyraja*.

Synonyms: *Breviraja (Arctoraja) smirnovi ankasube* Ishiyama, 1958

Conservation status: Least Concern

Genus: ***Bathyraja*** Ishiyama, 1958

48. ***Bathyraja abyssicola*** (Gilbert, 1896)

Raja abyssicola Gilbert, 1896: 396, pl. 20 (type locality: off Queen Charlotte Island, British Columbia, Canada, 52°39'30"N, 132°38'00"W)

Common names: En - Deepsea skate; Ru - Glubokovodnyj skat; Jp - Chihiro-kasubé; Cz - Rejnok hlubokomořský

Distribution: North Pacific. Pacific coast of Japan (from Honshu Island and to north), also Okhotsk Sea and Bering Sea, including Kuril Islands, Kamchatka and Komandor-Aleutian chain, on Pacific coast of North America from eastern Gulf of Alaska to northern part of Baja California, Mexico (Ishihara and Ishiyama, 1985; Zorzi and Anderson, 1988; Nakaya and Shirai, 1992; Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005; Shinohara et al., 2009; Balykin and Tokranov, 2010; Grigorov and Orlov, 2013). Marine species.

Remarks: In the past, this species was assigned to the genus *Raja* or *Rhinoraja* (e.g., Quast and Hall, 1972; Borets, 2000).

Conservation status: Data Deficient

49. ***Bathyraja aleutica*** (Gilbert, 1896)

Raja aleutica Gilbert, 1896: 397, pl. 21 (type locality: north of Sannak Pass, Aleutian Islands, U.S.A.)

Common names: En - Aleutian skate; Ru - Aleutskij skat; Jp - Aleutian-kasubé; Cz - Rejnok sanakský

Distribution: North Pacific. Pacific coast of Japan (to southern Honshu Island), also Sea of Japan, Okhotsk Sea and Bering Sea, including Sakhalin Island, Kurils, Kamchatka and Komandor-Aleutian chain, on Pacific coast of North America from southeast Gulf of Alaska to northern part of California, U.S.A. (Eschmeyer and Herald, 1983; Nakaya and Shirai, 1992; Sheiko and Fedorov, 2000; Balanov, 2000; Parin, 2001; Hoff, 2002; Mecklenburg et al., 2002; Love et al., 2005; Rooper and Wilkins, 2008; Ivanov and Sukhanov, 2010; Grigorov and Orlov, 2013; Shinohara et al., 2014). Marine species.

Remarks: In the past, according to Berg (1911), Sasaki (1972), Quast and Hall (1972), Borets (2000) and others, this species was assigned to the genus *Breviraja*, *Raja* or *Rhinoraja*.

Conservation status: Least Concern

50. ***Bathyraja andriashevi*** Dolganov, 1983

Bathyraja andriashevi Dolganov, 1983 (type locality: Pacific coast of Honshu, Japan, 36°24'N, 141°29'E)

Common names: En - Little-eyed skate or Andriashev's skate; Ru - Skat Andriyasheva; Jp - Andriashev-kasubé; Cz - Rejnok Andrijaševův

Distribution: Northwestern Pacific. Pacific and Okhotsk sides of Japan including southern Kuril Islands (Dudnik and Dolganov, 1992; Parin, 2001; Shinohara et al., 2009). Marine species.

Remarks: Some authors assigned this species to the genus *Rhinoraja* (e.g., Borets, 2000).

Conservation status: Least Concern

51. ***Bathyraja bergi*** Dolganov, 1983

Bathyraja bergi Dolganov, 1983: 70 (in key), fig. 95 (type locality: off Kholmsk, south-western coast of Sakhalin Island, Russia)

Common names: En - Berg's skate; Ru - Skat Berga; Jp - Soko-gangi-éi; Cz - Rejnok Bergův

Distribution: Northwestern Pacific. Pacific coast of northern Japan (Hokkaido Island and northern Honshu Island), including Sea of Japan and Okhotsk Sea (Amaoka et al., 1989; Sokolovsky et al., 2007, 2011; Shinohara et al., 2009, 2011, 2014; Ishihara et al., 2012: 10, in materials examined); Taiwan (Yeh et al., 2003), that is not given in the work by Ebert et al. (2013). Russian area: Sea of Japan and Okhotsk Sea, including Peter the Great Bay, Tatar Strait, Sakhalin Island and southern Kuril Islands (Lindberg and Legeza, 1959, as *Bathyraja interrupta*; Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011; Shinohara et al., 2011), probably northern Kurils (Sheiko and Fedorov, 2000). Marine species.

Remarks: By some authors (e.g., Sheiko and Fedorov, 2000; Parin, 2001), the taxa *Bathyraja caeluronigricans* Ishiyama & Ishihara, 1977 and *Bathyraja pseudoisotrachys* Ishihara &Ishiyama, 1985 are synonyms of *Bathyraja bergi*. But this opinion is not accepted in this paper, because there is no effective way to confirme it.

Conservation status: Least Concern

52. ***Bathyraja caeluronigricans*** Ishiyama & Ishihara, 1977

Bathyraja caeluronigricans Ishiyama & Ishihara, 1977: 74, figs. 9 A and B (type locality: off Hachinoche, 41°00'N, 142°00'E, Japan)

Common names: En - Purple-black skate; Ru - Khatinokhskij skat; Jp - Tsumura-kasubé; Cz - Rejnok hachinonský

Distribution: Northwestern Pacific. Pacific coast of northern Honshu Island and southern Okhotsk Sea, Japan (Ishiyama and Ishihara, 1977; Nakaya and Shirai, 1992; Shinohara et al., 2009, as *Bathyraja matsubarai*). The Okhotsk Sea coast of Shiretoko Peninsula, Hokkaido Island, Japan (Shinohara et al., 2012) and probably Kunashir Island, southern Kurils. Marine species.

Remarks: According to Sheiko and Fedorov (2000), Parin (2001), Orlov et al. (2004a) and others, this taxon is placed in the synonymy with *Bathyraja matsubarai* (Ishiyama, 1952). But, there is no effective way

to confirme it.

Conservation status: Unestablished

53. ***Bathyraja diplotaenia*** (Ishiyama, 1952)

Breviraja diplotaenia Ishiyama, 1952: 15, pl. 2; fig. 5 (type locality: Hokkaido, Japan)

Common names: En - Dusky-pink skate; Ru - Dvukhpolosyj skat; Jp - Ribbon-kasubé; Cz - Rejnok dvoupásý

Distribution: Northwestern Pacific. Pacific and Okhotsk sides of Hokkaido Island and Pacific coast of northern Honshu Island, Japan (Ishiyama and Ishihara, 1977; Amaoka et al., 1989; Ishihara et al., 2007; Yamauchi et al., 2008; Shinohara et al., 2009; Ishihara et al., 2012: 10, in materials examined). The record from the waters of Russia (Sea of Okhotsk and Pacific coast) was given by Grigorov and Orlov (2013). Marine species.

Remarks: Dolganov (1999) assigned this species to the genus *Rhinoraja*.

Conservation status: Least Concern

54. ***Bathyraja fedorovi*** Dolganov, 1983

Bathyraja fedorovi Dolganov, 1983: 74, Fig. 101 (type locality: near Pacific coast of Kunashir Island, southern Kurils, 44°41'N, 146°12'E, Russia)

Common names: En - Fedorov's skate; Ru - Skat Fedorova; Jp - Fedorov-kasubé; Cz - Rejnok Fedorovův

Distribution: Northwestern Pacific. Pacific coast of northern Japan, also Sea of Okhotsk, including Sakhalin Island, the coasts of Magadan, Kamchatka and Kuril Islands (Nakaya and Shirai, 1992; Sheiko and Fedorov, 2000; Parin, 2001; Shinohara et al., 2009; Grigorov and Orlov, 2013). Marine species.

Remarks: The type locality is in accordance with the specified coordinates in the Eschmeyer (2014). Borets (2000) assigned this species to the genus *Rhinoraja*.

Conservation status: Least Concern

55. ***Bathyraja hubbsi*** Ishihara & Ishiyama, 1985

Bathyraja hubbsi Ishihara & Ishiyama, 1985: 148, figs. 6A, B (type locality: Bering Sea, 61°11'N, 179°0'W)

Common names: En - Hubbs' skate; Ru - Skat Habbsa; Jp - Doro-kasubé; Cz - Rejnok Hubbsův

Distribution: The Bering Sea and Pacific coast of Kamchatka (Ishihara and Ishiyama, 1985). Marine species.

Remarks: According to some authors (e.g., Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Parin et al., 2014), this taxon is a junior synonym of *Rhinoraja taranetzi* Dolganov, 1983, but there is no effective way to confirme it.

Conservation status: Unestablished

56. ***Bathyraja interrupta*** (Gill & Townsend, 1897)

Raia interrupta Gill & Townsend, 1897: 232 (type locality: Bering Sea)

Common names: En - Interrupted skate or sandpaper skate; Ru - Preryvchatyj skat; Jp - Bering-kasubé; Cz - Rejnok přerušený

Distribution: North Pacific. Russian area: western Bering Sea to Cape Navarin (Sheiko and Fedorov, 2000; Parin, 2001; Balykin and Tokranov, 2010). On Pacific coast of North America from Aleutians (Agattu and Seguam islands) to southern California, U.S.A. (Ishihara and Ishiyama, 1985; Allen and Smith, 1988; Mecklenburg et al., 2002; Love et al., 2005; Yang, 2007). Marine species.

Remarks: Dolganov (1999) and Sheiko and Fedorov (2000) assigned this species to the genus *Rhinoraja*. Taxonomic status of *Bathyraja kincaidii* (Garman, 1908) remains disputable, because some researchers (e.g., Quast and Hall, 1972; Eschmeyer and Herald, 1983; Mecklenburg et al., 2002; Love et al., 2005) regarded that

it is a separate species with distribution from northern Baja California (Mexico) to British Columbia (Canada) and the Bering Sea. On the other hand, others (Ishihara and Ishiyama, 1985; Sheiko and Fedorov, 2000; etc.) considered that *B. kincaidii* is a junior synonym of *Bathyraja interrupta*.

Conservation status: Least Concern

57. ***Bathyraja isotrachys*** (Günther, 1877)

Raja isotrachys Günther, 1877: 434 (type locality: Shizuoka, 34°07'N, 138°00'E, Japan), see Ishihara and Ishiyama (1985)

Common names: En - Raspback skate; Ru - Gladkij skat; Jp - Challenger-kasubé; Cz - Rejnok tvrdý

Distribution: Northwestern Pacific. From East China Sea and Pacific coast of Hokkaido Island and Honshu Island (Japan) to southern Kamchatka including Sea of Japan and Okhotsk Sea, also Kurils, Sakhalin Island, Tatar Strait and the coast of Primorsky Krai (Lindberg and Legeza, 1959; Ishihara and Ishiyama, 1985; Sheiko and Fedorov, 2000; Parin, 2001; Orlov and Ishihara, 2004a; Shinohara et al., 2009). Marine species.

Remarks: Some authors assigned this species to the genus *Breviraja* or *Rhinoraja*.

Conservation status: Least Concern

58. ***Bathyraja lindbergi*** Ishiyama & Ishihara, 1977

Bathyraja lindbergi Ishiyama & Ishihara, 1977: 82, figs. 14 A and B (type locality: Bering Sea, 57°47'N, 173°47'W)

Common names: En - Commander skate or Lindberg's skate; Ru - Skat Lindberga; Jp - Komandoru-kasubé; Cz - Rejnok Lindbergův

Distribution: North Pacific. Japan (Hokkaido Island and Honshu Island) and from southern Okhotsk Sea to Bering Sea and Aleutian Islands, probably to western Gulf of Alaska (Ishihara and Ishiyama, 1985: 175, in comparative material; Nakaya and Shirai, 1992; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007). Marine species.

Remarks: In the past, this taxon was regarded as a synonym of *Bathyraja matsubarai* (Ishiyama, 1952) (e.g., Sheiko and Fedorov, 2000; Parin, 2001), but there is no effective way to evaluate it.

Conservation status: Least Concern

59. ***Bathyraja maculata*** Ishiyama & Ishihara, 1977

Bathyraja maculata Ishiyama & Ishihara, 1977: 80, figs. 13 A and B (type locality: Bering Sea, 59°10'N, 166°19'E, Russia)

Common names: En - White-blotched skate; Ru - Pyatnistyj skat; Jp - Montsuki-kasubé; Cz - Rejnok skvrnitý

Distribution: North Pacific. The northern Japan, Okhotsk Sea and Bering Sea, including Tatar Strait, Sakhalin Island, Kuril Islands, Kamchatka and Komandor-Aleutian chain (Ishiyama and Ishihara, 1977; Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005; Sokolovsky et al., 2007; Stevenson et al., 2007; Rooper and Wilkins, 2008). Marine species.

Conservation status: Least Concern

60. ***Bathyraja mariposa*** Stevenson, Orr, Hoff & McEachran, 2004

Bathyraja mariposa Stevenson, Orr, Hoff & McEachran, 2004: 306, figs. 1–6 (type locality: Tanaga Pass, Aleutian Islands, 51.34°N, 178.57°W, U.S.A.)

Common names: En - Butterfly skate; Ru - Skat-babochka; Jp - Ageha-kasubé; Cz - Rejnok motýlí

Distribution: Aleutian Islands, U.S.A. (Stevenson et al., 2004, 2007; Rooper and Wilkins, 2008; Szalay et al., 2011). Russian area: Kamchatka (Davis and Ebert, 2009). Marine species.

Conservation status: Data Deficient

61. ***Bathyraja matsubarai*** (Ishiyama, 1952)

Breviraja matsubarai Ishiyama, 1952: 10 (type locality: off Erimo Peninsula, 41°30'N, 143°15'E, Hokkaido, Japan)

Common names: En - Dusky-purple skate or Matsubara's skate; Ru - Skat Matsubary; Jp - Matsubara-éi; Cz - Rejnok Matsubarův

Distribution: Northwestern Pacific. Pacific coast of Hokkaido Island and northern Honshu Island (Japan) including Sea of Okhotsk (Ishiyama and Ishihara, 1977; Yamauchi et al., 2008; Shinohara et al., 2009; Ishihara et al., 2012: 11, in materials examined; Tohkairin et al., 2015). Marine species.

Remarks: More research is needed for distribution of *B. matsubarai*, because, in the past, the name of this species included the following taxa: *Bathyraja caeluronigricans* Ishiyama & Ishihara, 1977, *Bathyraja notoroensis* Ishiyama & Ishihara, 1977 and *Bathyraja lindbergi* Ishiyama & Ishihara, 1977. But, in this paper, these taxa are placed in the rank of separate species (such as the *Bathyraja caeluronigricans* Ishiyama & Ishihara, 1977, *Bathyraja notoroensis* Ishiyama & Ishihara, 1977 and *Bathyraja lindbergi* Ishiyama & Ishihara, 1977).

Conservation status: Data Deficient

62. ***Bathyraja minispinosa*** Ishiyama & Ishihara, 1977

Bathyraja minispinosa Ishiyama & Ishihara, 1977: 83, figs. 15 A and B (type locality: Bering Sea, 59°10'N, 166°19'E, Russia)

Common names: En - Smallthorn skate; Ru - Melkoshipyj skat; Jp - Subesube-kasubé; Cz - Rejnok malotrnný

Distribution: North Pacific. Hokkaido Island (Japan), also Bering Sea, Okhotsk Sea and Sea of Japan, including Sakhalin Island, Kurils, Kamchatka and Komandor-Aleutian chain and northern part of British Columbia, Canada (Ishiyama and Ishihara, 1977; Dudnik and Dolganov, 1992; Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007). Marine species.

Conservation status: Least Concern

63. ***Bathyraja notoroensis*** Ishiyama & Ishihara, 1977

Bathyraja notoroensis Ishiyama & Ishihara, 1977: 78, figs. 12 A and B (type locality: off Notoro Peninsula, 44°00'N, 144°30'E, Japan)

Common names: En - Notoro skate; Ru - Skat notoro; Jp - Notoro-kasubé; Cz - Rejnok notoronský

Distribution: Northwestern Pacific. Pacific and Okhotsk sides of the Hokkaido Island (Japan) and southern Okhotsk Sea (Ishiyama and Ishihara, 1977; Nakaya and Shirai, 1992). Marine species.

Remarks: According to some authors (e.g., Sheiko and Fedorov, 2000; Parin, 2001), this species is a synonym of *Bathyraja matsubarai* (Ishiyama, 1952), but there is no effective way to evaluate it.

Conservation status: Unestablished

64. ***Bathyraja pseudoisotrachys*** Ishihara & Ishiyama, 1985

Bathyraja pseudoisotrachys Ishihara & Ishiyama, 1985: 165, figs. 18A, B (type locality: off Muroran, Hokkaido, Japan)

Common names: En - Muroran skate; Ru - Muroranskij skat; Jp - Soko-gangi-ei; Cz - Rejnok muroranský

Distribution: Northwestern Pacific. Hokkaido Island, Japan (Ishihara and Ishiyama, 1985). No record from waters of Russia. Marine species.

Remarks: According to Sheiko and Fedorov (2000) and Parin (2001), this taxon was a synonym of *Bathyraja bergi* Dolganov 1983.

Conservation status: Unestablished

65. ***Bathyraja spinicauda*** (Jensen, 1914)

Raja spinicauda Jensen, 1914: 30, pl., figs. 1–5 (type locality: Davis Strait and fjords of southwestern Greenland)

Common names: En - Spinetail skate; Ru - Shipokhvostyj skat; Cz - Rejnok trnoocasý

Distribution: North Atlantic and adjacent Arctic. From Arctic Canada and southern Greenland to the coast of Murman (Russia) and southern Spitsbergen in the Barents Sea southward along the European coast to North Sea, including Spitsbergen, Jan Mayen Island, Iceland and Faeroes (Andriashev, 1954; Baranenkova et al., 1962; Parin, 2001; Coad and Reist, 2004; Dolgov et al., 2005; Dolgov, 2006, 2011; Williams et al., 2008; Møller et al., 2010; Wienerroither et al., 2011a, 2011b; Ebert and Stehmann, 2013). Marine species.

Remarks: This species is sometimes assigned to the genus *Breviraja* or *Raja*.

Conservation status: Near Threatened

66. ***Bathyraja spinosissima*** (Beebe & Tee-Van, 1941)

Psammobatus spinosissimus Beebe & Tee-Van, 1941: 259, pl. 2, fig. 4 (type locality: 60 miles south of Cocos Island, eastern Pacific, 4°50'N, 87°00'W)

Common names: En - White skate; Ru - Belyj skat; Jp - Hanareme-kasubé; Cz - Rejnok trnitý

Distribution: North Pacific. Russian area: Sea of Okhotsk including northern Kuril Islands (Dudnik and Dolganov, 1992; Dolganov, 1999; Sheiko and Fedorov, 2000; Parin, 2001; Ebert and Orlov, 2004). Marine species.

Remarks: Borets (2000) assigned this taxon to the genus *Rhinoraja*.

Conservation status: Least Concern

67. ***Bathyraja trachouros*** (Ishiyama, 1958)

Breviraja (Bathyraja) trachouros Ishiyama, 1958: 329, fig. 62 (type locality: off Erimo Peninsula, Hokkaido, Japan)

Common names: En - Erimo skate; Ru - Skat erimo; Jp - Zara-kasubé; Cz - Rejnok erimský

Distribution: Northwestern Pacific. Northern Japan from Sendai Bay (northern part of Honshu Island) to Okhotsk coast in the northeastern part of Hokkaido Island (Ishiyama and Ishihara, 1977: 88, in comparative materials; Amaoka et al., 1989; Ishihara et al., 2004; Yamauchi et al., 2008; Shinohara et al., 2009; Tohkairin et al., 2015); Taiwan, where this record is probably by misidentifation and it would be such as *Bathyraja isotrachys* (Günther, 1877) (see note by Ebert et al., 2013). No record from Russian water. Marine species.

Conservation status: Least Concern

68. ***Bathyraja trachura*** (Gilbert, 1892)

Raia trachura Gilbert, 1892: 539 (type locality: 32°40'30"N, 117°31'30"W, Santa Barbara Channel, California, U.S.A.)

Common names: En - Roughtail skate; Ru - Chernyy skat; Jp - Yasuda-kasubé; Cz - Rejnok santabarbarský

Distribution: North Pacific. The Okhotsk Sea and Bering Sea (on the western part northward to Cape Navarin), including Kamchatka, northern Kurils and Komandor-Aleutian chain, on Pacific coast of Northern America to central part of Baja California and Mexico (Quast and Hall, 1972; Eschmeyer and Herald, 1983; Ishihara and Ishiyama, 1985; Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005). Marine species.

Remarks: Some authors (e.g., Borets, 2000) assigned this species to the genus *Rhinoraja*.

Synonyms: *Raja microtrachys* Osburn & Nichols, 1916

Conservation status: Least Concern

69. ***Bathyraja tzinovskii*** Dolganov, 1983

Bathyraja tzinovskii Dolganov, 1983: 76 (in key), fig. 105 (type locality: off Honshu, Japan, 40°12'N,

143°35'E)

Common names: En - Creamback skate or Tzinovsky's skate; Ru - Skat Tsinovskogo; Jp - Tzinovsky-kasubé; Cz - Rejnok Cinovského

Distribution: Northwestern Pacific. Pacific coast of northern Japan in the Tohoku region (Shinohara et al., 2009). Russian area: the Okhotsk Sea, including eastern Sakhalin Island, southern Kurils and western Kamchatka (Parin, 2001; Orlov et al., 2004b; Ivanov and Sukhanov, 2010). Marine species.

Conservation status: Least Concern

70. ***Bathyraja violacea*** (Suvorov, 1935)

Raja violacea Suvorov, 1935: 433, fig. 1 (type locality: western coast of Kamchatka, Okhotsk Sea, Russia)

Common names: En - Okhotsk skate; Ru - Fioletovyi skat; Jp - Kitano-kasubé; Cz - Rejnok fialový

Distribution: North Pacific. Pacific coast of northern Japan (Hokkaido Island), also Sea of Japan, Okhotsk Sea (from Hokkaido Island) and Bering Sea (on the western coast northward to Cape Navarin), including Kurils, Sakhalin Island, Kamchatka, Komandor-Aleutian chain and to the Alaska in the northern part of Bering Sea (Lindberg and Legeza, 1959; Ishiyama and Ishihara, 1977; Nakaya and Shirai, 1992; Dolganov, 1999; Sheiko and Fedorov, 2000; Balanov 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007; Kim, 2010; Tohkairin et al., 2015). Marine species.

Synonyms: *Breviraja abasiriensis* Ishiyama, 1952: 19, pl. 3, fig. 6 (type locality: off Abasiri, Okhotsk Sea, Japan)

Conservation status: Data Deficient

Genus: ***Rhinoraja*** Ishiyama, 1952

71. ***Rhinoraja kujiensis*** (Tanaka, 1916)

Raja kujiensis Tanaka, 1916: 173 (type locality: off Kuji, Ibarabi Prefecture, Japan)

Common names: En - Dapple-bellied softnose skate; Ru – Kudzhijskij skat; Jp - Kuji-kasubé; Cz - Rejnok kujiský

Distribution: Northwestern Pacific. Japan: Pacific and Okhotsk sides of Hokkaido Island to East China Sea (Wang et al., 2009; Shinohara et al., 2009; Ishihara et al., 2012: 11, in materials examined; see Online [In Japanese]: http://shir-etok.myftp.org/shizen_rekishi/seibutsu/sakana_list); also known from southern Kurils, Paramushir Island (Wang et al., 2009). Marine species.

Conservation status: Least Concern

72. ***Rhinoraja longicauda*** Ishiyama, 1952

Rhinoraja longicauda Ishiyama, 1952: 25, pl. 4, fig. 7 (type locality: off Hachinohe to Erimo Peninsula, Japan)

Common names: En - White-bellied softnose skate; Ru - Yaponskij dlinnokhvostyj skat; Jp - Onaga-kasubé; Cz - Rejnok dlouhoocasý

Distribution: Northwestern Pacific. The northern part of Japan (the coasts of Hokkaido Island and northern Honshu Island) and southern part of Sea of Okhotsk (Nakaya and Shirai, 1992; Parin, 2001; Orlov and Ishihara, 2004b; Shinohara et al., 2009; Ishihara et al., 2012: 11, in materials examined). Russian area: Sea of Okhotsk including Pacific coast of southern Kuril Islands (Sheiko and Fedorov, 2000; Parin, 2001; Orlov and Ishihara, 2004b; Grigorov and Orlov, 2013). Marine species.

Conservation status: Least Concern

73. ***Rhinoraja taranetzi*** Dolganov, 1983

Rhinoraja taranetzi Dolganov, 1983: 77, fig. 107 (type locality: off northern Kuril Islands, 49°44'N, 155°29"E)

Common names: En - Taranetz's skate; Ru - Skat Tarantsa; Jp - Taranetz-kasubé; Cz - Rejnok Taranetzův

Distribution: North Pacific. Pacific coast of Kuril Islands, also Okhotsk Sea and Bering Sea, including eastern Kamchatka and Komandor-Aleutian chain (Dolganov, 1999; Sheiko and Fedorov, 2000; Parin, 2001; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007; Davis et al., 2007; Ivanov and Sukhanov, 2010); Alaska, U.S.A. (Ishihara et al., 2012: 11, in materials examined). Marine species.

Remarks: Some authors assigned this species to the genus *Bathyraja* (see Mecklenburg et al., 2002; Lynghammar et al., 2013). In the opinions by Parin (2001), Mecklenburg et al. (2002) and others, the taxa *Bathyraja hubbsi* Ishihara & Ishiyama, 1985 and *Rhinoraja longi* Raschi & McEachran, 1991 are synonyms of *Rhinoraja taranetzi*, but there is no effective way to evaluate it.

Conservation status: Least Concern

Family: **Rajidae** Blainville, 1816
(En - Skates; Ru - Rombovye skaty; Jp - Ganngi-éi-ka;Cz - Rejnokovití)

Genus: ***Amblyraja*** Malm, 1877

74. ***Amblyraja badia*** (Garman, 1899)

Raja badia Garman, 1899: 22, pl. 6, figs. 1, 2 (type locality: Gulf of Panama, 7°05'30"N, 79°40'W)

Common names: En - Broad skate; Ru - Shirokij skat; Jp - Mitsuboshi-kasubé; Cz - Rejnok panamský

Distribution: Eastern Pacific, North Pacific. Pacific coast of northern Japan and from southern Okhotsk Sea to Navarin Canyon in the northern part of Bering Sea. On the Pacific coast of North America, it is known from Aleutian Islands to British Columbia, Canada and central Panama, including Gulf of California (Nakaya and Shirai, 1992; Stevenson and Orr, 2005; Love et al., 2005; Stevenson et al., 2007; Shinohara et al., 2009). Marine species.

Remarks: *Raja badia* or *Raja (Amblyraja) badia* is used for this species by some authors (e.g., Zorzi and Anderson, 1988; Nakaya and Shirai, 1992).

Conservation status: Least Concern

75. ***Amblyraja hyperborea*** (Collett, 1879)

Raja hyperborea Collett, 1879: 7 (type locality: 155 km west of Spitzbergen)

Common names: En - Arctic skate; Ru - Severnyj skat; Cz - Rejnok tmavobřichý

Distribution: ?Cosmopolitan. Russian area: Barents Sea (as is also Franz Josef Land), Kara Sea, Laptev Sea, East Siberian Sea, Chukchi Sea, Bering Sea and northern Okhotsk Sea, including northern Kuril Islands and western Kamchatka (Andriashev, 1954; Borkin, 1983; Dolganov, 1999; Sheiko and Fedorov, 2000; Parin, 2001; Dolgov et al., 2005, 2011; Balykin and Tokranov, 2010; Mecklenburg et al., 2011; Wienerroither et al., 2011a; Dolgov 2011, 2013). Marine species.

Remarks: According to Grigorov and Orlov (2013), the record of this species in the Far East seas of Russia was with mark "?". Some authors assigned this species to the genus *Raja* (e.g., Sheiko and Fedorov, 2000; Parin, 2001).

Synonym: *Raja borea* Garman, 1899

Conservation status: Least Concern

76. ***Amblyraja radiata*** (Donovan, 1808)

Raja radiata Donovan, 1808: CXIV, pl. (type locality: north coast of Britain)

Common names: En - Thorny skate; Ru - Zvezdchatyj skat; Cz - Rejnok hvězdnatý

Distribution: North Atlantic and adjacent Arctic. Russian area: Barents Sea, White Sea and Kara Sea (Gratzianov, 1907; Berg, 1911; Andriashev, 1954; Altukhov et al., 1958; Rass, 1983; Dolgov, 1997, 2011, 2012, 2013; Parin, 2001; Gritsenko et al., 2006; Dolgov et al., 2011; Wienerroither et al., 2011a), also Gulf of

Gdansk in the southern part of Baltic Sea (Kontula and Haldin, 2012). Marine and brackish species.

Remarks: Record of this species from South African water is incorrect, and they should be assigned to the other species *Amblyraja taaf* (Meisner, 1987) (see Stehmann and Parin, 1994; Ebert and Stehmann, 2013). In the past, some authors (e.g., Stehmann and Parin, 1994; Parin, 2001) assigned this species to the genus *Raja*.

Synonym: *Raia americana* DeKay, 1842; *Raia scabrata* Garman, 1913

Conservation status: Vulnerable A2b

Genus: ***Beringraja*** Ishihara, Treloar, Bor, Senou & Jeong, 2012

77. ***Beringraja binoculata*** (Girard, 1855)

Raja binoculata Girard, 1855: 196 (type locality: San Francisco, California, U.S.A.)

Common names: En - Big skate; Ru - Bol'shoj skat, ili dvuglazyj skat; Jp - Higashi-megane-kasubé; Cz - Rejnok dvouoký

Distribution: North Pacific. Bering Sea (Cape Navarin), Aleutians and on the Pacific coast of Nortn America from eastern Gulf of Alaska to Baja California, Mexico (Quast and Hall, 1972; Eschmeyer and Herald, 1983; Allen and Smith, 1988; Dolganov, 1999; Mecklenburg et al., 2002; Love et al., 2005; Yang, 2007). Russian area: from Cape Navarin to Glubokaya Bay, northern part of western Bering Sea (Allen and Smith, 1988) and Kamchatka (Gratzianov, 1907). In the past, this species was defined for southern part of Sakhalin Island, Gulf of Aniva, Port Korsakov, Sea of Okhotsk (Schmidt, 1904: 291; Gratzianov, 1907: 36; Berg, 1911: 90). Thereafter, according to Parin (2001), this record was redefined as *Bathyraja parmifera* (Bean, 1881). However, on the modern data about *Bathyraja parmifera* the distribution is extended more to the north in Bering Sea and northeastern part of Pacific Ocean, therefore most likely the record from Sakhalin Island is probably belong to *Arctoraja smirnovi* (Soldatov & Pavlenko, 1915). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). Some authors assigned this species to the genus *Dipturus*, but this species was more usually placed in the genus *Raja*. Ishihara et al. (2012) established the genus *Beringraja* based on this species and *Raja pulchra*.

Synonym: *Raja cooperi* Girard, 1858

Conservation status: Near Threatened

78. ***Beringraja pulchra*** (Liu, 1932)

Raja pulchra Liu, 1932: 162, figs. 10, 10a (type locality: Tsingtao, China)

Common names: En - Mottled skate; Ru - Izyashchnyj skat; Jp - Megane-kasubé; Cz - Rejnok krásný

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island), also East China Sea, Yellow Sea, Sea of Japan and southern Okhotsk Sea (from Hokkaido Island), including Sakhalin Island, the coast of Primorsky Krai (Russia), La Perouse Strait and southern Kuril Islands (Lindberg and Legeza, 1959; Amaoka et al., 1989; Parin, 2001; Sokolovsky et al., 2007, 2011; Dolganov, 2010; Grigorov and Orlov, 2013; Tohkairin et al., 2015). Marine species.

Remarks: This species was sometimes assigned to the genus *Dipturus* (see Dolganov, 2010), but more often to the genus *Raja* (e.g., Grigorov and Orlov, 2013). At present, this species is assigned to the genus *Beringraja* (Ishihara et al., 2012).

Conservation status: Vulnerable A2bcd+3cd+4cd

Genus: ***Dipturus*** Rafinesque, 1810

79. ***Dipturus batis*** (Linnaeus, 1758)

Raja batis Linnaeus, 1758: 231 (type locality: European seas [«in Oceano Europæo»])

Common names: En - Blue skate; Ru - Gladkiy skat; Cz - Rejnok hladký

Distribution: Eastern Atlantic and adjacent Arctic. On the eastern Atlantic Ocean coast from northern

Norway to Senegal and Madeira, including North, western Baltic, Mediterranean and Black seas (Walker and Heessen, 1996; Serena, 2005; Fricke, 2007; Fricke et al., 2007; Williams et al., 2008; Eschmeyer, 2014). Russian area: Barents Sea including the coast of Murman (Berg, 1911; Andriashev, 1954; Parin, 2001; Dolgov et al., 2005; Dolgov, 2006, 2011). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). Probably, this species in the Russian part of the Barents Sea is wrongly defined as *Malacoraja clavata* (Linnaeus, 1758) (pers. comm. by A.V. Dolgov). According to Iglésias et al. (2010), *Dipturus batis* consists of a complex of species, which includes two nominal species: the blue skate (it is preliminary specified as *Dipturus* cf. *flossada*) and the flapper skate (it is preliminary specified as *Dipturus* cf. *intermedia*). Some authors assigned this species to the genus *Raja* (e.g., Parin, 2001; Karamushko, 2008).

Synonyms: ?*Raia flossada* Risso, 1827; *Raia gaimardi* Gaimard, 1851; *Propterygia hyposticta* Otto, 1821; ?*Raia intermedia* Parnell, 1837; *Raia obscura* Cabrera, Pérez & Haenseler, 1817; *Batis vulgaris* Couch, 1862; *Raia vulgaris* Stephan, 1779.

Conservation status: Critically Endangered A2bcd+4bcd

80. ***Dipturus oxyrinchus*** (Linnaeus, 1758)

Raja oxyrinchus Linnaeus, 1758: 231 (type locality: Mediterranean Sea [«in M. Mediterraneo & O. Europæo»])

Common names: En - Longnosed skate; Ru - Dlinnorylyj skat; Cz - Rejnok ostronosý

Distribution: Eastern Atlantic and adjacent Arctic. From northern Norwegian coast, southern Barents Sea to Senegal, including Madeira and Canary Islands, also North Sea, Norwegian Sea, Mediterranean Sea, Aegean Sea and Marmara Sea, and probably Black Sea (Andriashev, 1954, as *Raja oxyrhynchus*; Walker and Heessen, 1996; Dolgov, 2000, 2004, 2005; Serena, 2005; Fricke et al., 2007; Stiansen and Filin, 2008; Williams et al., 2008; Ebert and Stehmann, 2013; Lynghammar et al., 2013). The data about finds of this species in the Russian waters of Barents Sea is not available (pers. comm. by A.V. Dolgov). Marine species.

Remarks: No information is available on type specimens, and the spelling the specific names as «*oxyrhynchus*» is incorrect (see Eschmeyer, 2014).

Synonyms: *Raja acus* Lacepède, 1803; *Raja salviani* Müller & Henle, 1841; *Raja vomer* Fries, 1838

Conservation status: Near Threatened

81. ***Dipturus tengu*** (Jordan & Fowler, 1903)

Raja tengu Jordan & Fowler, 1903: 654, fig. 8 (type locality: Matsushima Bay, Sendai, Japan)

Common names: En - Acutenose skate; Ru - Skat tengu; Jp - Tengu-kasubé; Cz - Rejnok tengu

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island), also Sea of Japan, Yellow Sea, East China Sea and South China Sea including Taiwan (Lindberg and Legeza, 1959; Amaoka et al., 1989; Dolganov, 1999; Randall and Lim, 2000; Shinohara et al., 2009; Sokolovsky et al., 2011; Ebert et al., 2013); one specimen is known from the waters of Philippines (Ishihara, 1987; Compagno et al., 2005). Russian area: the coast of Primorsky Krai southward to Peter the Great Bay, Sea of Japan (Lindberg and Legeza, 1959; Parin, 2001; Sokolovsky et al., 2007, 2011); probably the Sea of Okhotsk (Grigorov and Orlov, 2013). Marine species.

Remarks: In the past, species name *Raja tengu*, *Raja (Dipturus) tengu* or *Raja (Tengujei) tengu* was used by some authors for this species.

Conservation status: Data Deficient

Genus: ***Leucoraja*** Malm, 1877

82. ***Leucoraja fullonica*** (Linnaeus, 1758)

Raja fullonica Linnaeus, 1758: 231 (type locality: European seas [«in M. Europeo»])

Common names: En - Shagreen skate; Ru - Shagrenevyj skat; Cz - Rejnok zrnitý

Distribution: Eastern Atlantic and adjacent Arctic. From White Sea and Barents Sea to Morocco and Madeira, including Iceland and Faeroes, also North Sea, Norwegian Sea, western Baltic Sea and Mediterranean Sea (Gratzianov, 1907; Andriashev, 1954; Walker and Heessen, 1996; Dolgov, 2004, 2011; Fricke et al., 2007; Williams et al., 2008; Ebert and Stehmann, 2013; Eschmeyer, 2014). Russian area: the White and Barents seas (Berg, 1911; Andriashev, 1954; Dolgov, 2000, 2005, 2011; Parin, 2001). However, it is necessary to notice that modern data about records from Russian part of Barents Sea and White Sea are not present (pers. comm. by A.V. Dolgov). Marine species.

Remarks: No information is available on type specimens (Eschmeyer, 2014). In the past, a species name *Raja fullonica* or *Raja (Leucoraja) fullonica* was used for this species.

Synonyms: *Raja chagrinea* Shaw, 1804; *Raja fullonica* Stephan, 1779; *Raja gallica* Walbaum, 1792; *Raja rondeleti* Bougis, 1959

Conservation status: Near Threatened

Genus: ***Malacoraja*** Stehmann, 1970

83. ***Malacoraja clavata*** (Linnaeus, 1758)

Raja clavata Linnaeus, 1758: 232 (type locality: Mediterranean Sea and northeastern Atlantic [«in Oceano Europæo»])

Common names: En - Thornback skate; Ru - Kolyuchiy skat; Jp - Daruma-gangi-éi; Cz - Rejnok ostnatý

Distribution: Eastern Atlantic and adjacent Arctic. Southwestern part of Indian Ocean (Stehmann, 1995; Serena, 2005; Ebert and Stehmann, 2013). From southwestern Barents Sea, northern Norway to Namibia, including Iceland, Madiera and Azores, also Norwegian Sea, North Sea, western Baltic Sea, Mediterranean Sea, Aegean Sea, Marmara Sea, Black Sea and Azov Sea (Gratzianov, 1907; Svetovidov, 1964; Walker and Heessen, 1996; Serena, 2005; Fricke, 2007; Fricke et al., 2007; Byrkjedal and Høines, 2007; Williams et al., 2008; Kontula and Haldin, 2012; Boltachev and Karpova, 2012). Russian area: Azov Sea and Black Sea (Svetovidov, 1964; Vasil'eva, 2007; Diripasko et al., 2011; Grigorov and Orlov, 2013), no record from the Russian waters of Barents Sea, but, in the past, this species was recorded from off the coast of Murman at Kharlovka (e.g., Gratzianov, 1907: 34), that according to Berg (1911) was given as is erroneous. Marine species.

Remarks: No information is available on type specimens (Ebert and Stehmann, 2013), and it is necessary to designate the lectotype or neotype for stability of nomenclature (Eschmeyer, 2014). According to Ishihara et al. (2012), the morphological feature of egg capsules of *Raja clavata* is close to those of species belonging to the genus *Malacoraja*. But this species is usually assigned to the genus *Raja*.

Synonyms: *Hieroptera abredonensis* Fleming, 1841; *Raia aspera* Risso, 1810; *Raja capensis* Müller & Henle, 1841; *Raja leiobatos* Gronow in Gray, 1854; *Cephaleutherus maculatus* Rafinesque, 1810; *Raja pontica* Pallas, 1814; *Raia rhizacanthus* Regan, 1906; *Raia rubus* Bloch, 1784

Conservation status: Near Threatened

Genus: ***Okamejei*** Ishiyama, 1958

84. ***Okamejei kenojei*** (Müller & Henle, 1841)

Raja kenojei Müller & Henle, 1841: 149 (type locality: Nagasaki fish market, Japan)

Common names: En - Ocellate spot skate; Ru - Yaponskij skat; Jp - Komon-kasubé; Cz - Rejnok japonský

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island), also Okhotsk Sea (southeastern Sakhalin Island), Sea of Japan, Yellow Sea, East China Sea and South China Sea including Taiwan (Lindberg and Legeza, 1959; Ishihara, 1987; Parin, 2001; Ishihara et al., 2009a; Sokolovsky et al., 2011; Ishihara et al., 2012: 11, in materials examined; Ebert et al., 2013); the coast of Vladivostok, Russia

(Berg, 1911, probably as *Okamejei meerdervoortii*). Marine species.

Remarks: The lectotype was designated by Boeseman (1947) (Eschmeyer, 2014). In the past, a species name *Raja fullonica* or *Raja (Leucoraja) fullonica* was used for this species (e.g., Berg, 1911; Lindberg and Legeza, 1959; Dolganov, 1987).

Synonyms: *Raja fusca* Garman, 1885; *Raja japonica* Nyström, 1887; *Raja katsukii* Tanaka, 1927; *Raja porosa* Günther, 1874; *Raja tobae* Tanaka, 1916

Conservation status: Data Deficient

85. ***Okamejei meerdervoortii*** (Bleeker, 1860)

Raja meerdervoortii Bleeker, 1860: 66 (type locality: Nagasaki, Japan)

Common names: En - Bigeye skate; Ru - Poristyj skat; Jp - Medama-kasubé; Cz - Rejnok nagasacký

Distribution: Western Pacific. Pacific coast of Japan, also Sea of Japan, Yellow Sea, East China Sea and South China (?northern Taiwan) seas (Ishihara, 1987; Randall and Lim, 2000; Sokolovsky et al., 2007, 2011; Shao et al., 2008); records on the findings of this species in the water of the Taiwan are not confirmed (see note by Ebert et al., 2013). Russian area: it is known on the basis of only one specimen, probably from Peter the Great Bay in the Sea of Japan (Sokolovsky et al., 2007, 2011). Marine species.

Remarks: Some authors used species name *Raja meerdervoorti* or *Raja (Okamejei) meerdervoorti* for this species. The spelling of the specific name as «*meerdervoorti*» is incorrect (see Eschmeyer, 2014). In the past, Lindberg and Legeza (1959) claimed that this species is the synonym of *Raja porosa* Günther, 1874.

Synonyms: *Raja macrophthalma* Ishiyama, 1950

Conservation status: Data Deficient

Genus: ***Raja*** Linnaeus, 1758

86. ***Raja rhina*** Jordan & Gilbert, 1880

Raia rhina Jordan & Gilbert, 1880: 251 (type locality: Monterey Bay and San Francisco Bay, California, U.S.A.)

Common names: En - Longnose skate; Ru - Dlinnorylyj skat; Jp - Shirano-kasubé; Cz - Rejnok kalifornský

Distribution: Northeastern Pacific and Bering Sea. From Navarin Canyon in the Bering Sea and Unalaska Island (Aleutian Islands) along the North American coast to Baja California, Mexico (Eschmeyer and Herald, 1983; Allen and Smith, 1988; Dolganov, 1999; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007). Russian area: in the western Bering Sea (Dolganov, 1987, 1999); ?Sea of Okhotsk (Grigorov and Orlov, 2013). Marine species.

Conservation status: Least Concern

Genus: ***Rajella*** Stehmann, 1970

87. ***Rajella fyllae*** (Lütken, 1887)

Raja fyllae Lütken, 1887: 1, pl. 1 (type locality: Davis Strait, Greenland)

Common names: En - Round skate; Ru - Kruglyj skat; Cz - Rejnok listový

Distribution: North Atlantic and adjacent Arctic. Northeastern Atlantic Ocean coast to the northern Norway, including Iceland, Faeroes and Scotland, northward to north of Spitsbergen (81°25,2'N., 30°49,5'E) and southern Greenland (Andriashev, 1954; Neelov and Chernova, 2005; Williams et al., 2008; Kulka et al., 2009; Møller et al., 2010; Wienerroither et al., 2011a; Dolgov, 2011). Russian area: the coast of Murman and Novaya Zemlya, Barents Sea (Gratzianov, 1907; Berg, 1911; Andriashev, 1954; Parin, 2001; Dolgov et al., 2005; Dolgov, 2006, 2011; Kulka et al., 2009; Wienerroither et al., 2011a). Marine species.

Remarks: According to Ebert and Stehmann (2013), *Breviraja marklei* McEachran & Miyake, 1987 is a

synonym of *R. fyllae*. In the past, some authors (e.g., Parin, 2001) assigned this species to the genus *Raja*.

Synonyms: *Raja lipacantha fyllae* Jensen, 1905; *Breviraja marklei* McEachran & Miyake, 1987

Conservation status: Least Concern

88. ***Rajella lintea*** (Fries, 1838)

Raja lintea Fries, 1838: 154, fig. 10 (type locality: Northern Europe, Bohuslän [Sweden]; North Sea [eastern North Atlantic])

Common names: En - Sailray or linen skate; Ru - Parusnyy skat; Cz - Rejnok severní

Distribution: Northeastern Atlantic and adjacent Arctic. From northern part of Barents Sea and northern coast of Norway (Norwegian Sea) to Iceland and southwestern Greenland (Ponomarenko, 1961; Poletaev and Shibanov, 1982; Dolgov and Igashov, 2001; Dolgov et al., 2005; Dolgov, 2006; Møller et al., 2010; Mecklenburg et al., 2011; Wienerroither et al., 2011a). Russian area: Barents Sea (e.g., Dolgov, 2006, 2011). Marine species.

Remarks: Some authors assigned this species to the genus *Raja* or *Dipturus* as *Dipturus linteus*. But more recently, Stehmann (2012) assigned this species to the genus *Rajella*.

Synonyms: *Raja ingolfiana* Lütken, 1898

Conservation status: Least Concern

Order: **Myliobatiformes** Compagno, 1973
(En - Stingrays; Ru - Orlyakovye skaty; Jp- Tobi- éi-moku)

Family: **Dasyatidae** Jordan, 1888
(En - Whiptail stingrays; Ru - Khvostokolovye; Jp - Aka-éi-ka; Cz - Trnuchovití)

Genus: ***Dasyatis*** Rafinesque, 1810

89. ***Dasyatis akajei*** (Müller & Henle, 1841)

Trygon akajei Müller & Henle, 1841: 165, pl. 54, fig. 1 (type locality: southwestern coast of Japan)

Common names: En - Red stingray; Ru - Krasnyj khvostokol; Jp - Aka-éi; Cz - Trnucha východní

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island and to south), also Sea of Japan, Yellow Sea, East China Sea and northern South China Sea, including Korean Peninsula, China, Taiwan and probably Philippines (Amaoka et al., 1989; Nishida and Nakaya, 1990; Compagno et al., 2005; Shao et al., 2008; Shinohara et al., 2014). Russian area: the coast of Primorsky Krai, Sea of Japan including Peter the Great Bay and Olga Bay (Berg, 1911, as *Trygon akajei*; Lindberg and Legeza, 1959; Sokolovskaya et al., 1998; Parin, 2001; Sokolovsky et al., 2007, 2011). Marine and brackish species.

Remarks: The lectotype was designated by Boeseman (1947) (Eschmeyer, 2014). Compagno et al. (2005) reported this species from the waters of Philippines as *Dasyatis* cf. *akajei* – Philippine red stingray. Furthermore, this species was recorded from water of Taiwan as *Dasyatis* cf. *akajei* by Ebert et al. (2013).

According to Rass (1983), Nishida and Nakaya (1990), and Vasil'eva (1999), the taxon *Dasyatis gigantea* (Lindberg, 1930) - Giant stumptail stingray, is a valid species which is known only from the two specimens from Askold Island in the Peter the Great Bay, northern Sea of Japan. According to personal communication from H. Ishihara and Parin (2001), this taxon is synonym of *Dasyatis akajei* Miyosi, 1939.

Synonyms: *Urolophoides giganteus* Lindberg in Soldatov & Lindberg, 1930: 26, fig. 4 (type locality: Peter the Great Bay, Sea of Japan, Russia)

Conservation status: Near Threatened

90. ***Dasyatis matsubarai*** Miyosi, 1939

Dasyatis matsubarai Miyosi, 1939: 96, fig. 3 (type locality: off Hyuga Nada, east coast of Miyazaki

Prefecture, Japan)

Common names: En - Pitted stingray or Matsubara's stingray; Ru - Khvostokol Matsubary; Jp - Hoshi-éi; Cz - Trnucha Matsubariho

Distribution: Northwestern Pacific. Pacific coast of Japan (Hokkaido Island), also southern Okhotsk Sea and Sea of Japan (Lindberg and Legeza, 1959; Amaoka et al., 1989; Nishida and Nakaya, 1990; Fishes the Shiretoko coast, 2010; see Online [In Japanese]:
http://shir-etok.myftp.org/shizen_rekishi/seibutsu/sakana_list); probably southern Kurils. Russian area: coast of Primorsky Krai from Peter the Great Bay and to south (Sokolovskaya et al., 1998; Sokolovsky et al., 2007, 2011). Marine species.

Remarks: The taxon *Dasyatis multispinosa* (Tokarev, 1959) – multispine giant stingray, in the original description was known from one copy in Sea of Japan, south of Cape Gamova, Russia (Lindbergh and Legeza, 1959). According to Nishida and Nakaya (1990), Parin (2001), pers. comm. by H. Ishihara, it is a junior synonym of *Dasyatis matsubarai* Miyosi, 1939.

Synonyms: *Urolophoides multispinosus* Tokarev in Lindbergh & Legeza, 1959: 142, figs. 89, 90 (type locality: Sea of Japan, 140 miles south of Cape Gamov, Russia)

Conservation status: Data Deficient

91. ***Dasyatis pastinaca*** (Linnaeus, 1758)

Raja pastinaca Linnaeus, 1758: 232 (type locality: Mediterranean Sea and Northeastern Atlantic [«in Europa»])

Common names: En - Common stingray; Ru - Obyknovennyj khvostokol; Cz - Trnucha obecná

Distribution: Eastern Atlantic and southwestern part of Indian Ocean. From Skagerrak to Cape of Good Hope and Natal (southeastern Africa), including Madagascar, Comoros Islands, also North Sea, western Baltic Sea, Mediterranean Sea, Aegean Sea, Marmara Sea, Black Sea and Azov Sea (Gratzianov, 1907; Berg, 1911; Svetovidov, 1964; Diripasko et al., 2001, 2011; Fricke, 2007; Fricke et al., 2007; Vasil'eva, 2007; Kontula and Haldin, 2012; Boltachev and Karpova, 2012; Ebert and Stehmann, 2013). Russian area: Black Sea and Azov Sea (Gratzianov, 1907; Berg, 1911; Svetovidov, 1964; Parin, 2001; Vasil'eva, 2007; Diripasko et al., 2011; Boltachev and Karpova, 2012; Grigorov and Orlov, 2013). Marine and brackish species.

Remarks: In the past, Gratzianov (1907), Berg (1911), and Nikolsky (1950) assigned this species to the genus *Trygon*. Probably, in the waters of West Africa to Angola, there is another species similar to *Dasyatis pastinaca* (see Ebert and Stehmann, 2013: 398).

Conservation status: Data Deficient

Genus: ***Neotrygon*** Castelnau, 1873

92. ***Neotrygon kuhlii*** (Müller & Henle, 1841)

Trygon kuhlii Müller & Henle, 1841: 164, pl. 51 (type locality: Vanicoro, Solomon Islands and New Guinea)

Common names: En - Bluespotted stingray; Ru - Pyatnistyj khvostokol; Jp - Yakko-éi; Cz - Trnucha vanicorská

Distribution: Indo-western Pacific. Russian area: coast of Primorsky Krai, including Peter the Great Bay, Sea of Japan (Sokolovskaya et al., 1998; Sokolovsky et al., 2007, 2011). Marine.

Remarks: Some authors assigned this species to the genus *Amphotistius* or *Dasyatis* (see Eschmeyer, 2014).

Synonyms: *Raya trigonoides* Castelnau, 1873

Conservation status: Data Deficient

Genus: ***Pteroplatytrygon*** Fowler, 1910

93. ***Pteroplatytrygon violacea*** (Bonaparte, 1832)

Trygon violacea Bonaparte, 1832: fasc. 1, punt. 6, pl. 155 (type locality: Italy, western Mediterranean Sea)

Common names: En - Pelagic stingray or violet stingray; Ru - Fioletovyj khvostokol; Jp - Karasu-éi; Cz - Trnucha fialová

Distribution: Cosmopolitan in all warm seas (Nishida and Nakaya, 1990). Russian area: Pacific coast of southern Kuril Islands (Savinykh, 1998; Fedorov and Parin, 1998; Parin, 2001; Ivanov and Sukhanov, 2002). Marine species.

Remarks: Some authors assigned this species to the genus *Dasyatis* or *Breviraja* (see Eschmeyer, 2014).

Synonyms: *Dasyatis guileri* Last, 1979

Conservation status: Least Concern

Family: **Gymnuridae** Fowler, 1934
(En - Butterfly rays; Ru - Gimnurovye; Jp - Tsubakuro-éi-ka; Cz - Křídlounovití)

Genus: ***Gymnura*** van Hasselt, 1823

94. ***Gymnura altavela*** (Linnaeus, 1758)

Raja altavela Linnaeus, 1758: 232 (type locality: Naples, Italy, Mediterranean Sea [«in Mari Mediterraneo»])

Common names: En - Spiny butterfly ray; Ru - Kolyuchij skat-babochka; Cz - Křídloun atlantský

Distribution: Atlantic. Eastern Atlantic: from Portugal to Angola, including Mediterranean Sea, Aegean Sea, Marmara Sea and Black Sea, also Madeira and Canary Islands (Serena, 2005; Fricke et al., 2007; Vasil'eva, 2007; Ebert and Stehmann, 2013). The closest occurrence from Russian waters is the Black Sea coast of Turkey (Fricke et al., 2007). Marine and brackish species.

Remarks: No information is available on type specimens (Eschmeyer, 2014).

Synonyms: *Pteroplatea binotata* Lunel, 1879; *Pteroplatea canariensis* Valenciennes, 1843; *Raja maclura* Lesueur, 1817; *Pteroplatea vaillantii* Rochebrune, 1880; *Pteroplatea valenciennii* Duméril, 1865

Conservation status: Vulnerable A2bd+4bd

95. ***Gymnura japonica*** (Temminck & Schlegel, 1850)

Pteroplatea japonica Temminck & Schlegel, 1850: 309, pl. 141 (type locality: Nagasaki Bay, Japan)

Common names: En - Japanese butterfly ray; Ru - Yaponskij skat-babochka; Jp - Tsubakuro-éi; Cz - Křídloun japonský

Distribution: Northwestern Pacific and probably in central part of western part of Pacific Ocean (Ishihara et al., 2009b). The closest occurrence from Russian waters is the Hokkaido Island, Japan and southern part of Korean Peninsula (Ishihara et al., 2009b). Marine species.

Remarks: The lectotype was designated by Boeseman (1947) (Eschmeyer 2014).

Synonyms: ?*Pteroplatea bimaculata* Norman, 1925; ?*Pteroplatea jordani* Chu, 1930

Conservation status: Data Deficient

Family: **Myliobatidae** Bonaparte, 1838
(En - Eagle rays; Ru - Orlyakovye skaty; Jp - Tobi-éi-ka; Cz - Mantovití)

Subfamily: **Myliobatinae** Bonaparte, 1838
(En - Eagle rays; Ru - Orlyakovye skaty; Jp - Tobi-éi-aka)

Genus: ***Myliobatis*** Cuvier, 1817

96. ***Myliobatis tobijei*** Bleeker, 1854

Myliobatis tobijei Bleeker, 1854: 425 (type locality: Nagasaki, Japan)

Common names: En - Japanese eagle ray; Ru - Orlinyj skat; Jp - Tobi-éi; Cz - Siba japonská

Distribution: Northwestern Pacific. Pacific coast of Japan (from Hokkaido Island), also Sea of Japan, Yellow Sea, East China Sea and South China Sea (the coast of Taiwan) (Lindberg and Legeza, 1959; Ueno and Abe, 1966a; Amaoka et al., 1989; Carpenter and Niem, 1999; Randall and Lim, 2000; Shao et al., 2008; Ebert et al., 2013). The closest occurrence from Russian waters is Pacific coast of the Hokkaido Island in the northern Japan and southern part of Sea of Japan. Marine species.

Remarks: Compagno et al. (2005) listed as *Myliobatis* cf. *tobijei* in the list of species from the waters of Philippines. It is probably an undescribed species.

Conservation status: Data Deficient

Subfamily: **Mobulinae** Gill, 1893

(En - Devil rays; Ru - Morskie d'yavoly; Jp - Itomaki-éi-aka)

Genus: ***Mobula*** Rafinesque, 1810

97. ***Mobula japanica*** (Müller & Henle, 1841)

Cephaloptera japanica Müller & Henle, 1841: 185 (type locality: Nagasaki, Japan)

Common names: En - Spinetail devil ray; Ru - Yaponskiy morskoj d'yavol; Jp - Ito-maki- éi; Cz - Manta japonská

Distribution: Circumglobal in all warm waters. The closest occurrence from Russian waters is the Korean Peninsula and Pacific coast of the southern Hokkaido Island, northern Japan (Amaoka et al., 1989; White et al., 2006). Marine species.

Remarks: The lectotype was designated by Boeseman (1947) (Eschmeyer 2014).

Conservation status: Near Threatened

98. ***Mobula tarapacana*** (Philippi, 1892)

Cephaloptera tarapacana Philippi, 1892: 8, pl. 3, fig. 2 (type locality: 12 miles west of Iquique, Tarapacà Province, Chile)

Common names: En - Chilean devil ray; Ru - Chiliyskij morskoy d'yavol; Jp - Taiwan-Ito-maki-éi; Cz - Manta chilská

Distribution: ?Circumglobal to cold temperate waters, but mainly in warm water. The closest occurrence from the Russian water is the Okhotsk coast of Hokkaido Island, Japan (Tomita et al., 2013). Marine species.

Synonyms: ?*Mobula coilloti* Cadenat & Rancurel, 1960; *Mobula formosana* Teng, 1962

Conservation status: Data Deficient

Family: **Urolophidae** Müller & Henle, 1841

(En - Round rays; Ru - Korotkohvostye hvostokoly; Jp - Hirata-éi-ka; Cz - Tlustoocaskovití)

Genus: ***Urolophus*** Müller & Henle, 1837

99. ***Urolophus aurantiacus*** Müller & Henle, 1841

Urolophus aurantiacus Müller & Henle, 1841: 173 (type locality: Port Western, Victoria, Australia; Tasmania, Australia; Gotto Island, Japan)

Common names: En - Sepia stingray; Ru - Oranzhevyj urolof; Jp - Hirata-éi; Cz - Tlustoocaska oranžová

Distribution: Western Pacific. The closest occurrence from Russian waters is the southern part of Sea of Japan (Shinohara et al., 2011) and probably Korean Peninsula (Last and Marshall, 2006). Marine species.

Conservation status: Near Threatened

Class: **Holocephali** Bonaparte, 1832
(En - Chimaeras; Ru - Tsel'nogolovye; Cz - Chimérovci)

Order: **Chimaeriformes** Patterson, 1965
(En - Chimaeras; Ru - Khimeroobraznye; Jp - Gin-zamé-moku; Cz - Chimérotvární)

Family: **Chimaeridae** Bonaparte, 1831
(En - Shortnose chimaeras, Ratfishes; Ru - Khimerovye; Jp - Gin-zamé-ka; Cz - Chimérovití)

Genus: ***Chimaera*** Linnaeus, 1758

100. ***Chimaera monstrosa*** Linnaeus, 1758

Chimaera monstrosa Linnaeus, 1758: 236 (type locality: Atlantic [«Habitat in mari Atlantico»])

Common names: En - European chimaera or rabbit fish; Ru - Evropeyskaya khimera; Cz - Chiméra podivná

Distribution: Eastern Atlantic and adjacent Arctic. From southwestern Barents Sea (coasts of Russia and Norway) to Morocco, Madeira and Azoreses, including North Sea, western Baltic Sea and Mediterranean Sea (mainly in the western part) (Dolgov, 2004, 2011; Serena, 2005; Fricke, 2007; Fricke et al., 2007; Byrkjedal and Høines, 2007; Williams et al., 2008; Kontula and Haldin, 2012; Eschmeyer, 2014); one juvenile specimen was recorded from water of southeastern Greenland, 62°09'N, 40°35'W (Møller et al., 2010). Russian area: the Murman coast including Rybach'ya Bank and in 69°04' N, 39°24'E, Barents Sea (Gratzianov, 1907; Rass, 1983; Dolgov, 2006, 2011). Marine species.

Remarks: No information is available on type specimens (Ebert and Stehmann, 2013).

Synonyms: *Chimaera arctica* Gistel, 1848; *Chimaera argentea* Ascanius, 1772; *Chimaera borealis* Shaw, 1804; *Chimaera cristata* Faber, 1829; *Chimaera dubia* Osório, 1909; *Chimaera mediterranea* Risso, 1827

Conservation status: Near Threatened

101. ***Chimaera phantasma*** Jordan & Snyder, 1900

Chimaera phantasma Jordan & Snyder, 1900: 338 (type locality: Tokyo Bay, Japan)

Common names: En - Silver chimaera; Ru - Chudovishchnaya khimera; Jp - Gin- zamé; Cz - Chiméra fantastická

Distribution: Western Pacific. Pacific coast of Japan (from Tohoku region) to Philippines, including Sea of Japan, Yellow Sea, East China Sea and South China Sea (Fujita et al., 1995; Randall and Lim, 2000; Compagno et al., 2005; Dagit, 2006a; Shinohara et al., 2009, 2011); the Fiji (Seeto and Baldwin, 2010). The closest occurrence from Russian waters is Pacific coast of northern Honshu Island, northern Japan (in the Tohoku region) and southern Sea of Japan (Shinohara et al., 2009, 2011, 2014). Marine species.

Conservation status: Data Deficient

Genus: ***Hydrolagus*** Gill, 1862

102. ***Hydrolagus barbouri*** (Garman, 1908)

Chimaera barbouri Garman, 1908: 255 (type locality: Aomori, near Tsugaru Strait, Japan)

Common names: En - Nine-spot chimaera or Barbour's chimaera; Ru - Pyatnistaya khimera; Jp - Kokonohoshi-gin-zamé; Cz - Chiméra japonská

Distribution: Northwestern Pacific. Pacific coast of Japan (Hokkaido Island and Honshu Island), also East China Sea, Sea of Japan and southern Okhotsk Sea (Amaoka et al., 1989; Nakaya and Shirai, 1992; Kokuho et al., 2003; Yamauchi et al., 2008; Shinohara et al., 2009, 2014). Russian area: Kuril Islands (it's mainly in the southern part) and southern Sakhalin Island (Sheiko and Fedorov, 2000; Parin, 2001; Kokuho et al., 2003; Poltev and Sheiko, 2007). Marine species.

Synonyms: *Chimaera spilota* Tanaka, 1908

Conservation status: Data Deficient

103. ***Hydrolagus colliei*** (Lay & Bennett, 1839)

Chimaera colliei Lay & Bennett, 1839: 71, pl. 23, fig. 1 (type locality: Monterey, California, U.S.A.)

Common names: En - Spotted chimaera or Collie's chimaera; Ru - Belopyatnistaya khimera; Cz - Chiméra běloskvrnná

Distribution: Northeastern Pacific. From Gulf of Alaska (Cape Spencer) to Baja California, Mexico (Quast and Hall, 1972; Eschmeyer and Herald, 1983; Allen and Smith, 1988; Gritsenko et al., 2006; Mecklenburg et al., 2002; Love et al., 2005; Stevenson et al., 2007). No record from Russian coast. Closest occurrence from Russian waters is the Gulf of Alaska, U.S.A. Marine species.

Remarks: By Berg (1911), this species may occur in the Bering Sea.

Synonyms: *Chimaera media* Garman, 1911

Conservation status: Least Concern

104. ***Hydrolagus mitsukurii*** (Jordan & Snyder, 1904)

Chimaera mitsukurii Jordan & Snyder, 1904: 224, fig. 2 (type locality: Japan)

Common names: En - Mitsukuri's chimaera; Ru - Khimera Mitsukuri; Jp - Aka-gin-zamé; Cz - Chiméra Mitsukurova

Distribution: Northwestern Pacific. From Japan (Honshu Island) and southern Korean Peninsula to Taiwan and Philippines including Sea of Japan (Compagno et al., 2005; Dagit, 2006b; Shao et al., 2008; Ebert et al., 2013; Shinohara et al., 2014). No record in the Russian waters. Marine species.

Synonyms: *Chimaera mitsukurii* Dean, 1904

Conservation status: Data Deficient

105. ***Hydrolagus purpurescens*** (Gilbert, 1905)

Chimaera purpurescens Gilbert, 1905: 582, fig. 231 (type locality: vicinity of Kauai Island, Hawaiian Islands)

Common names: En - Purple chimaera; Ru - Purpurnaya khimera; Jp - Murasaki-gin-zamé; Cz - Chiméra purpurová

Distribution: Western Pacific and Hawaiian Islands (Dagit, 2006c; Eschmeyer, 2014). Pacific coast of Hokkaido Island and Honshu Island (Japan) and southern part of Sea of Okhotsk (Nakaya and Shirai, 1992; Dagit, 2006c; Shinohara et al., 2009). Marine species.

Remarks: It was preliminary reported as *Hydrolagus* cf. *purpurescens* for southwestern part of the Sakhalin Island by Poltev and Sheiko (2007).

Synonyms: *Chimaera gilberti* Garman, 1911

Conservation status: Data Deficient

Family: **Rhinochimaeridae** Garman, 1901

(En - Longnose chimaeras; Ru - Rinokhimerovye; Jp - Tengu-gin-zamé-ka; Cz - Pachimérovití)

Genus: ***Rhinochimaera*** Garman, 1901

106. ***Rhinochimaera pacifica*** (Mitsukuri, 1895)

Harriotta pacifica Mitsukuri, 1895: 97, pl. 16 (type locality: Tokyo fish market, originally from Kurihama, near Misaki, Sagami Sea, Japan)

Common names: En - Pacific longnose chimaera; Ru - Tikhookeanskaya nosataya khimera; Jp - Tengu-gin-zamé; Cz - Pachiméra sagamská

Distribution: Indo-Pacific and Atlantic. Northwestern Pacific: from Pacific coast of Japan (Hokkaido Island and northern Honshu Island) to Taiwan, including East China Sea and South China Sea (Kobayashi and Sakurai, 1967; Nakaya and Shirai, 1992; Shao and Hwang, 1997; Randall and Lim, 2000; Shinohara et al., 2009; Ebert et al., 2013). The closest occurrence from Russian waters is Pacific coast of the Hokkaido Island, northern Japan (Kobayashi and Sakurai, 1967), and probably northern Kurils (see Sheiko and Fedorov, 2000). Marine species.

Conservation status: Least Concern

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